



# **THIRD GRADE**

## **MCA MATH RESOURCES**

The following resources are provided to parents and teachers as possible resources to help develop skills that will be a part of the MCA math test. The resources are also available at the Pearson Parent Access website. Classroom teachers may use resources and may also have recommendations concerning specific skills for practice.

# Interpreting Bar Graphs

Interpret bar graphs representing real-world data.

## Review

Answer key for this lesson is on the last page.

A bar graph is a graph that uses bars to display data. The bars can be horizontal or vertical. Each bar stands for an item. The length of the bar shows the number of items you have.

## Example A

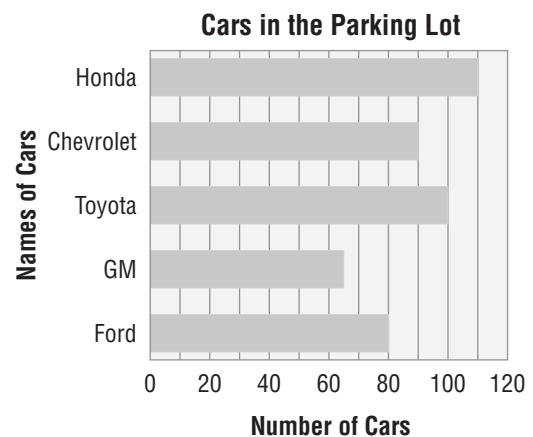
Use the bar graph to answer the question.

Which car manufacturer had no more than 90 cars in the parking lot?

**STEP 1** Find where the number 90 is located on the bottom of the bar graph.

**STEP 2** Move your finger up the vertical line that represents 90. Stop at the horizontal bar if it meets or does not cross this vertical line. Write down the name of these car manufacturers.

**STEP 3** Be sure that each manufacturer has no more than 90 cars.



**Ford:** 80 cars  
**GM:** 65 cars  
**Chevrolet:** 90 cars

Ford:  $80 < 90$  OK  
GM:  $65 < 90$  OK  
Chevrolet:  $90 = 90$  OK

So **Ford, GM, and Chevrolet** had no more than 90 cars each in the parking lot.

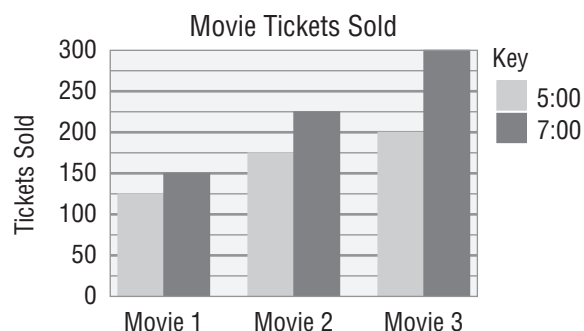
You can use a double bar graph to compare two different sets of data about the same thing.

### Example B

Use the double bar graph to answer the question.

Decide if the following statement is true.

There were twice as many tickets sold for the 7:00 showing of Movie 3 than the 7:00 showing of Movie 1.



**STEP 1** Look in the key for the color of the bar that represents the 7:00 showing.

**STEP 2** Find the Movie 1 bars. Then, find the Movie 1 7:00 bar. Follow this bar up until it stops at a horizontal line. Now, follow this line to the left to find the number of tickets sold.

**150 tickets** were sold for **Movie 1 at 7:00.**

**STEP 3** Find the Movie 3 bars. Then, find the Movie 3 7:00 bar. Follow this bar up until it stops at a horizontal line. Now, follow this line to the left to find the number of tickets sold.

**300 tickets** were sold for **Movie 3 at 7:00.**

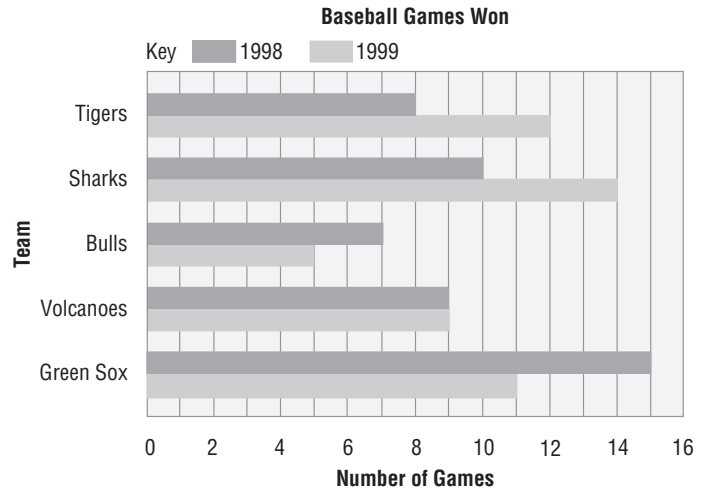
**STEP 4** Now, multiply the number of tickets sold for the 7:00 showing of Movie 1, 150, by 2. For the statement to be true, this product must equal 300, the number of tickets sold for the 7:00 showing of Movie 3.

$$150 \times 2 = 300 \quad \text{TRUE}$$

So, there were twice as many tickets sold for the 7:00 showing of Movie 3 than the 7:00 showing of Movie 1. **The statement is true.**

## Guided Practice

Heightstown kept track of the number of baseball games won by each of the five teams in 1998 and 1999. How many of these teams won more games in 1999 than in 1998?



Look in the key for the color of the bar that represents the games won in 1998.

Move your finger to the right to follow the 1999 bar for the Tigers. If the 1998 bar stops before your finger, then the Tigers won more games in 1999.

Continue this method to decide if each team won more games in 1999 than in 1998.

List the teams that won more games in 1999 than in 1998. Then, count the number of teams listed.

The Tigers won more games in \_\_\_\_\_.

The Sharks won more games in \_\_\_\_\_.

The Bulls won more games in \_\_\_\_\_.

The Volcanoes won the \_\_\_\_\_ number of games in 1998 and \_\_\_\_\_.

The Green Sox won more games in \_\_\_\_\_.

The \_\_\_\_\_ and \_\_\_\_\_ won more games in 1999.

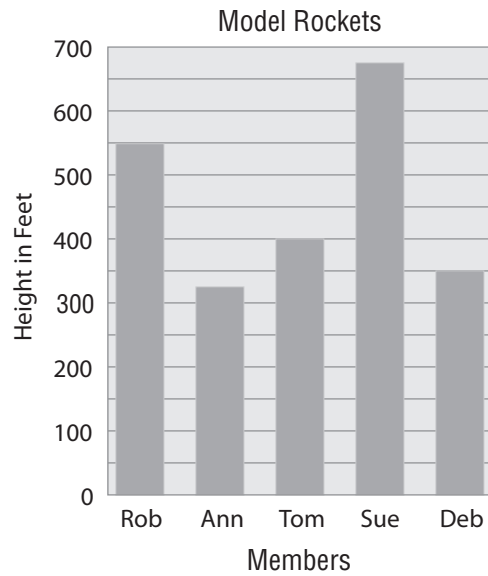
So, \_\_\_\_\_ baseball teams won more games in 1999 than in 1998.



## Practice A

Use the single bar graph to answer questions 1–4.

Members of the Columbia School Science Club tested model rockets. They recorded the height reached by each rocket. This vertical bar graph displays their results.



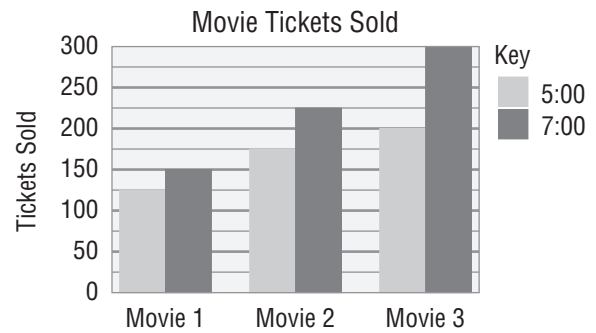
1. Whose rocket reached a height of exactly 325 feet?
2. How much higher did Rob's rocket go than Tom's rocket?
3. How many rockets rose at least 400 feet in the air?
4. How many rockets made it no more than 550 feet in the air?

## Practice B

Use the double bar graph to answer questions 5–8.

The cinema shows three different movies.

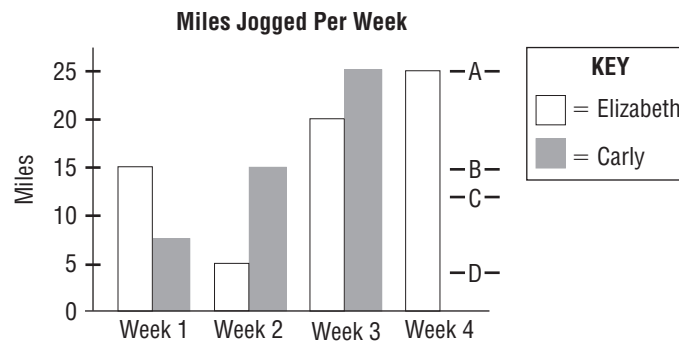
5. For which movie were the most tickets sold altogether?



6. How many showings sold more than 175 tickets?
7. How many showings sold no more than 175 tickets?
8. Which movies sold at least 400 tickets altogether?

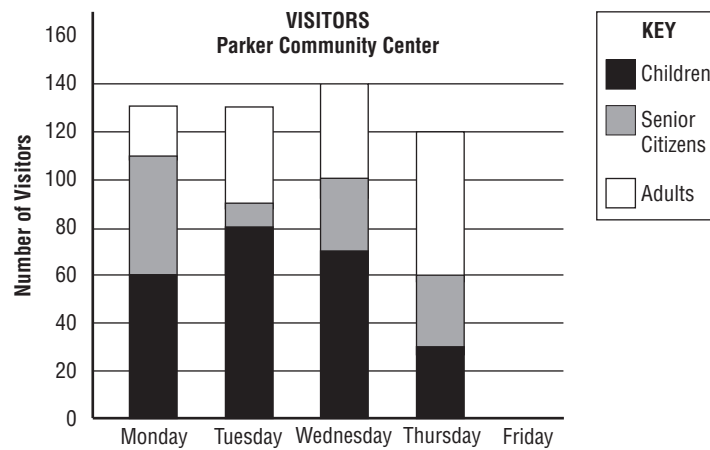
## Quiz

Use the bar graph to answer questions 1–3.



- How many miles did Elizabeth jog altogether over the four-week period?  
**A)** 25                      **B)** 40                      **C)** 47.5                      **D)** 65
- Carly's total number of miles jogged in Week 4 fell below her total for Week 1. Of the points A, B, C, D marked on the graph, which one could show how many miles Carly jogged in Week 4?  
**F)** Point A              **G)** Point B              **H)** Point C              **J)** Point D
- Which of these statements is best supported by information shown on the graph?  
**A)** Elizabeth can run faster than Carly.  
**B)** Carly and Elizabeth are jogging partners.  
**C)** Elizabeth was sick in Week 2.  
**D)** Carly needs to buy new jogging sneakers.

Use the bar graph to answer questions 4–6.



4. On which two days did the same number of adults visit the center?
- F)** Monday and Tuesday  
**G)** Tuesday and Wednesday  
**H)** Wednesday and Thursday  
**J)** Monday and Wednesday
5. On how many days was the group of children the largest group at the community center?
- A)** 1                      **B)** 2                      **C)** 3                      **D)** 4
6. The same number of children visited on Monday as adults visited on which day?
- F)** Monday      **G)** Wednesday      **H)** Thursday      **J)** Friday

# A: Answer Key

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## Guided Practice

1999  
1999  
1998  
same, 1999  
1998  
Tigers, Sharks  
two

## Practice A

- 1) Ann's rocket
- 2) 150 feet
- 3) 3 rockets; Rob's, Tom's and Sue's rockets
- 4) 4 rockets; Rob's, Ann's, Tom's and Deb's rockets

## Practice B

- 5) Movie 3; It sold 500 tickets altogether.
- 6) 3 showings; Movie 2 at 7:00 and Movie 3 both at 5:00 and 7:00
- 7) 3 showings; Movie 1 at both 5:00 and 7:00, and Movie 2 at 5:00
- 8) Movie 2 and Movie 3

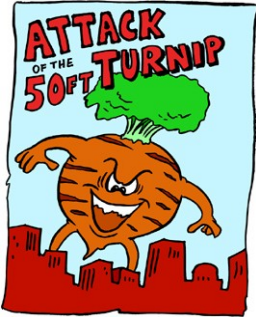
## Quiz

- 1) D      65
- 2) J      Point D
- 3) C      Elizabeth was sick in Week 2.
- 4) G      Tuesday and Wednesday
- 5) C      3
- 6) H      Thursday

Name: \_\_\_\_\_

Elapsed Time

## Going to the Movies



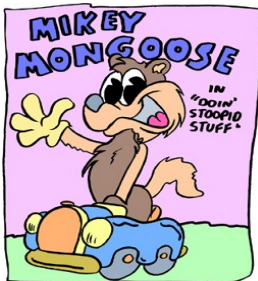
*Attack of the 50ft Turnip* plays at 7:10. It is now quarter to seven. How long before the movie starts?

\_\_\_\_\_



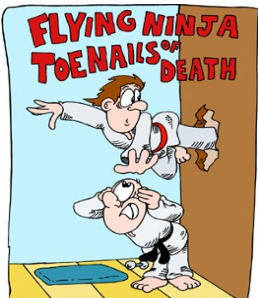
It takes 30 minutes to drive to the movie theater. *They Saved Frankenstein's Lunch* begins playing at ten after 1. What is the latest you can leave home?

\_\_\_\_\_



*Mikey Mongoose* begins at 2:35. It ends at 4:05. How long is the movie?

\_\_\_\_\_



You and your friend meet at the movie theater to see *Flying Ninja Toenails of Death*. You arrive at 5:40. Your friend arrives at 6:12. How long did you wait for your friend to arrive?

\_\_\_\_\_

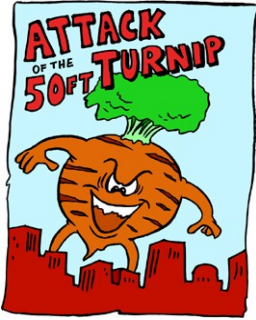


*Nuthouse Rocks* begins at 5:20. It is 1 hour and 50 minutes long. What time does the movie end?

\_\_\_\_\_

# ANSWER KEY

## Going to the Movies



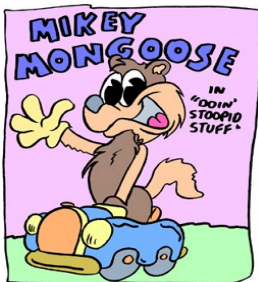
*Attack of the 50ft Turnip* plays at 7:10. It is now quarter to seven. How long before the movie starts?

25 minutes



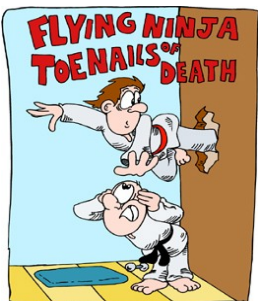
It takes 30 minutes to drive to the movie theater. *They Saved Frankenstein's Lunch* begins playing at ten after 1. What is the latest you can leave home?

12:40



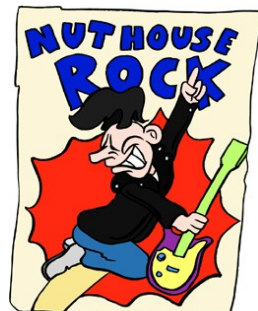
*Mikey Mongoose* begins at 2:35. It ends at 4:05. How long is the movie?

1 hour 30 minutes



You and your friend meet at the movie theater to see *Flying Ninja Toenails of Death*. You arrive at 5:40. Your friend arrives at 6:12. How long did you wait for your friend to arrive?

32 minutes



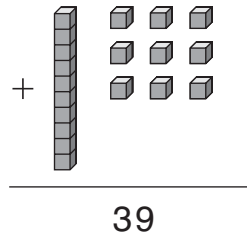
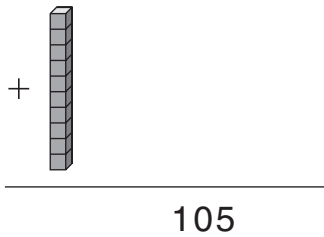
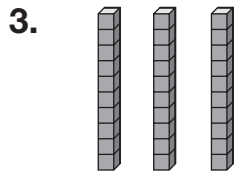
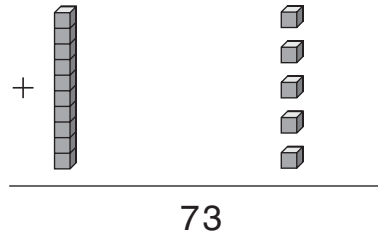
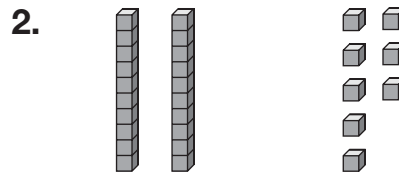
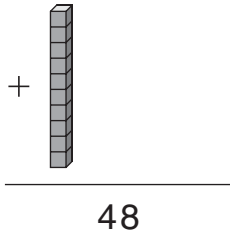
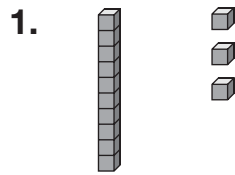
*Nuthouse Rocks* begins at 5:20. It is 1 hour and 50 minutes long. What time does the movie end?

7:10

Name \_\_\_\_\_

# Model the Sum

Draw the missing tens and ones for each sum.



Write the missing numbers.

5.

	7
+	59
96	

6.

	1	2
+		
110		

7.

	4	
+		2
95		



# Nature Museum

Nature Museum—Admission \$5.00		
Exhibits	Time	Price
Butterflies	25 min	Free
Birds	30 min	Free
Frogs	15 min	Free
Backyard critters	25 min	\$1.50
Flying insects	20 min	Free
Night creatures	45 min	\$2.25
Guided nature hike	50 min	\$4.00
Life in the trees	40 min	\$3.50

Total amount spent: \_\_\_\_\_

Name \_\_\_\_\_

# Baseball Stats

The high school baseball team sold packs of baseball cards to raise money to buy new equipment. Its goal was to raise \$1,000.

Use the information from the pictograph to fill in the Baseball Card Stats Worksheet.

**Packs of Cards Sold for \$2 Each**

Sunday	■ ■ ■ ■ ■ ■ ■ ■
Monday	■ ■ ■ ■ ■ ■ ■
Tuesday	■ ■ ■ ■ ■ ■
Wednesday	■ ■ ■ ■ ■
Thursday	■ ■ ■
Friday	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■
Saturday	■ ■ ■ ■

Each ■ = 10 packs of baseball cards.

**Baseball Card Stats Worksheet**

Day	Packs Sold	Money Earned
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		

1. What was the total number of packs of baseball cards sold?

\_\_\_\_\_

2. What strategy did you use to find the total number of packs of baseball cards sold for the week?

\_\_\_\_\_

\_\_\_\_\_

3. What was the total amount of money earned? \_\_\_\_\_

4. Did the baseball team reach its goal? Explain.

\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

## At the Bakery

Julia, Ralph, and Tom went to a bakery to buy cookies for a class party.

Use the clues to complete the two charts below.

### CLUES

- Julia bought 4 times as many chocolate chip cookies as peanut butter cookies.
- Julia bought 2 times as many oatmeal cookies as peanut butter cookies.
- Julia bought 3 peanut butter cookies.
- Ralph bought 4 times as many peanut butter cookies as Julia.
- Ralph bought 3 times as many oatmeal cookies as peanut butter cookies.
- Ralph bought 2 times as many chocolate chip cookies as peanut butter cookies.
- Tom bought 4 times as many chocolate chip cookies as Julia.
- Tom bought 4 times as many peanut butter cookies as Ralph.
- Tom bought 4 times as many oatmeal cookies as Julia.

**Cookies That Were Bought**

	Oatmeal Cookies	Peanut Butter Cookies	Chocolate Chip Cookies
Julia			
Ralph			
Tom			

**Total Number of Cookies Bought**

Oatmeal Cookies	
Peanut Butter Cookies	
Chocolate Chip Cookies	
Total Cookies	

Name \_\_\_\_\_

## Finish Them Up!

Finish each of these story problems. Make an addition story, a subtraction story, a multiplication story, and a division story. Then write a number sentence to solve each problem and write the answer.

- 1.** Carrie bought 4 bags of birdseed. There are 25 pounds of birdseed in each bag. Each bag cost \$8.

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Number Sentence: \_\_\_\_\_

Answer: \_\_\_\_\_

- 2.** Carrie bought a bird feeder for \$6, a book about birds for \$26, and a bird bath for \$42.

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Number Sentence: \_\_\_\_\_

Answer: \_\_\_\_\_

- 3.** Carrie has 16 pictures of birds. She wants to display the pictures in rows on a piece of poster board.

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Number Sentence: \_\_\_\_\_

Answer: \_\_\_\_\_

- 4.** Carrie counted the birds she saw at the park. She counted 15 blue jays, 8 robins, and 12 wrens.

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Number Sentence: \_\_\_\_\_

Answer: \_\_\_\_\_

Name \_\_\_\_\_

# Units of Time

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There are 60 minutes (min) in an hour (h).

There are 24 hours in a day (d).

There are 7 days in a week (wk).

To convert a larger unit to a smaller unit, multiply.

To find the number of hours in 2 days, multiply  $2 \times 24 = 48$ .

So, there are 48 hours in 2 days.

---

Complete to change the units.

1. 6 weeks = ■ ■ days

\_\_\_\_\_

2. 3 days = ■ ■ hours

\_\_\_\_\_

3. How many days are there  
in 7 weeks?

\_\_\_\_\_

4. How many minutes are there  
in 9 hours?

\_\_\_\_\_

5. How many days are there  
in 3 weeks 4 days?

\_\_\_\_\_

6. How many minutes are there  
in 4 hours 30 minutes?

\_\_\_\_\_

7. **Writing to Explain** Nikki's school day lasts 7 hours 20 minutes.

How many minutes does Nikki's school day last?

Explain how you found your answer.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

# Hours, Days, or Weeks?

You are making a model of a volcano for a science project.

1. You have 8 days to finish the project. Complete the pattern on the calendar. How many hours is that? \_\_\_\_\_ hours

MARCH						
S	M	T	W	T	F	S
1 24	2 48	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

2. It takes 4 hours for the paint to dry.  
How many minutes are in 4 hours? \_\_\_\_\_ minutes
3. Suppose you let the paint dry for 5 hours,  
15 minutes. How many minutes are in 5 hours,  
15 minutes? \_\_\_\_\_ minutes
4. Suppose you started working on the project  
2 days, 9 hours ago. How many hours  
is 2 days, 9 hours? \_\_\_\_\_ hours
5. You will enter your project in the science fair that  
takes place in 6 weeks. How many days away is  
the science fair? \_\_\_\_\_ days
6. The date for Monday of each week in April is listed.  
What is the date of the Monday of the fourth week?

Week	1	2	3	4
Date of Monday	April 6	April 13	April 20	?

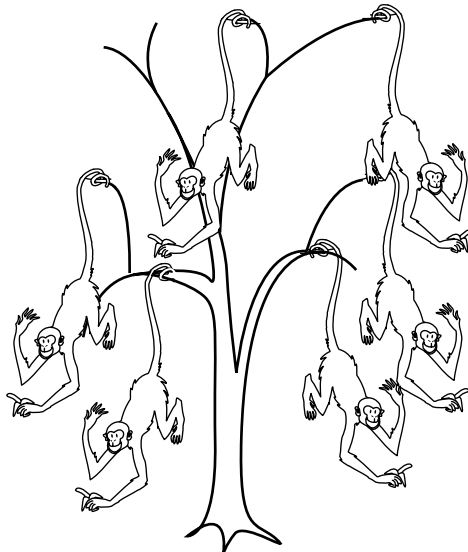
\_\_\_\_\_

Name \_\_\_\_\_

# Rhyming Multiplication

Write a number sentence for each verse.

1. As I was going to the store  
I saw seven dogs and one dog more.  
Each dog had fifteen bones to chew.  
How many bones came into view?  
  
\_\_\_\_\_
2. 18 marchers marched in a row.  
Each marcher had 4 horns to blow.  
They blew all the horns, both big and small.  
How many horns did they blow in all?  
  
\_\_\_\_\_
3. Six monkeys were kind of shifty.  
They all loved bananas and they each ate fifty.  
Bananas to monkeys are a special treat.  
How many bananas did the monkeys eat?  
  
\_\_\_\_\_
4. What did I see on the street today?  
Seventy-seven fire trucks came my way.  
Nine firefighters on each truck waved at me.  
How many firefighters did I see?  
  
\_\_\_\_\_



Name \_\_\_\_\_

## Flying High

	Atlanta				
Boston	946	Boston			
Chicago	606	867	Chicago		
Dallas	721	1,555	796	Dallas	
Denver	1,208	1,767	901	654	Denver
Detroit	505	632	235	982	1,135

Use the air distance chart above to write a number sentence for each problem. Then solve.

1. How many more miles does it take to get from Denver to Atlanta than to get from Detroit to Atlanta and Chicago to Atlanta combined?

\_\_\_\_\_

2. Jorge flew from Dallas to Detroit, from Detroit to Denver, and from Denver back to Dallas. How many miles did Jorge fly altogether? (Hint: If you do not find the distance easily, try reversing the order of the cities.)

\_\_\_\_\_

3. Maria flew from her home city of Boston to Atlanta, back home to Boston, and then back to Atlanta. How many miles did she fly altogether?

\_\_\_\_\_

4. How many more miles is it to fly round-trip between Dallas and Boston than between Denver and Chicago?

\_\_\_\_\_

\_\_\_\_\_



Name \_\_\_\_\_

# Problem Solving: Draw a Picture and Write an Equation

Read the question and follow the steps to develop a problem-solving strategy.

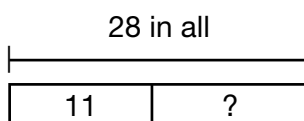
In the morning, a grocery store had 28 apples on display. By the end of the day, 11 apples had been purchased. How many apples were left?

## Step 1: Read/Understand

- Find the information you are given. [There were 28 apples; now there are 11 fewer apples.]
- Find the information you need to figure out. [The number of apples that are left]

## Step 2: Plan

- Draw a picture that helps you visualize the problem you are trying to solve.



## Step 3: Solve

- Figure out which operation you need to use to solve the problem, and write an equation. [Subtraction;  $28 - 11 = ?$ ]
- Solve the equation to answer the problem. [ $28 - 11 = 17$ ; 17 apples were left.]

1. Erika put 12 flakes of fish food in her fish tank before school, and 13 more when she got home. How many flakes did she put in the tank? Use the steps below.

## Step 1:

- What information are you given?  
\_\_\_\_\_
- What information do you need to figure out?  
\_\_\_\_\_

## Step 2:

- Draw a picture.

## Step 3:

- Choose an operation and write an equation.  
\_\_\_\_\_
- Solve the equation.  
\_\_\_\_\_

Solve the following problems. Draw pictures to help you.

2. Roy is reading a book that is 68 pages. He has read 24 pages so far. How many more pages does he have to read to finish the book? \_\_\_\_\_
3. There are 29 students in the school band. During practice, 6 new students joined the band. How many students are in the band now? \_\_\_\_\_
4. Jaycee's teacher gave her a box of 96 pens. She gave 17 of the pens to her classmates. How many pens were left in the box? \_\_\_\_\_

Name \_\_\_\_\_

## Problem Solving: Two-Question Problems

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### Read and Understand

**Problem 1:** Gina gave 3 sheets of paper to each of the 12 students in her class. How many sheets of paper did she give out?

**Problem 2:** Each sheet of paper had 3 paperclips attached to it. How many paperclips did she give out?

Answer Problem 1 first.

— ? Sheets of paper —

12	12	12
----	----	----

$12 \text{ students} \times 3 \text{ sheets of paper} = 36 \text{ sheets of paper}$   
Gina gave out 36 sheets of paper.

### Plan and Solve

Use the answer from Problem 1 to solve Problem 2.

— ? Paper clips —

36	36	36
----	----	----

$36 \text{ sheets of paper} \times 3 \text{ paperclips} = 118 \text{ paperclips}$   
Gina gave out 118 paperclips.

---

Solve. Use the answer from Problem 1 to solve Problem 2.

1. **Problem 1:** April made 16 baskets and glued 5 flowers on each one. How many flowers did she use altogether?

**Problem 2:** Each flower April used had 8 petals. How many petals were there on all the flowers she used?

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2. **Problem 1:** Jorge washed cars for four hours on Saturday. In the first hour, he washed 2 cars. In the second hour, he washed 1 car. In the third hour, he washed 3 cars. How many cars did he wash all together in the first three hours?

**Problem 2:** Jorge washed the same number of cars in the fourth hour as he did in the first three hours combined. How many cars did he wash all together in four hours?

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Name \_\_\_\_\_ Date \_\_\_\_\_

Mathematics Problem Solving  
Volume 4, Number 29, April 26, 1999  
www.rhlschool.com

## Fractions and Mixed Numbers

1. Harris is walking from his farm to the nearby village. It's a four kilometer walk and he has only one more kilometer to go. He has already walked \_\_\_\_\_ of the way.

- a.  $\frac{3}{4}$
- b.  $\frac{1}{2}$
- c.  $\frac{1}{4}$
- d.  $\frac{1}{3}$
- e.  $\frac{2}{5}$

2. Kathy spent  $3\frac{1}{2}$  hours practicing the piano on Saturday. She spent  $\frac{3}{4}$  of an hour practicing on Sunday. Kathy practiced playing the piano for \_\_\_\_\_ on that weekend.

- a. 3 hours
- b. 4 hours
- c. 4 hours, 4 minutes
- d. 4 hours, 15 minutes
- e.  $4\frac{1}{2}$  hours



3. Cheryl baked eight loaves of bread. She gave  $\frac{2}{3}$  of a loaf to Steve,  $\frac{2}{3}$  of a loaf to Jill, and put all the uncut loaves in the freezer. What is the greatest number of loaves that she could have put in the freezer?

- a. 4
- b. 5
- c. 6
- d. 7
- e. 8

4. Yesterday, Ryan ran around the track three times and Scott ran around the track two times. Which statement(s) about yesterday's running *cannot* be true?

- a. Ryan ran  $1\frac{7}{8}$  miles.
- b. Scott ran  $\frac{2}{3}$  as far as Ryan.
- c. Ryan ran  $1\frac{1}{2}$  times as far as Scott.
- d. Scott ran faster than Ryan
- e. Scott ran  $\frac{1}{3}$  of a mile farther than Ryan.

5. Which of the above statement(s) about yesterday's running *must* be true?

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Name \_\_\_\_\_ Date \_\_\_\_\_

Mathematics Problem Solving  
Volume 4, Number 28, April 19, 1999  
www.rhlschool.com

### Fractions and Sets

1. There are 23 students in Mrs. Matt's third grade. Eleven of the students are boys. What fraction of the class do girls represent?
2. Darlene bought a dozen cupcakes for her party. Pablo ate two of the cupcakes. What fraction of the dozen cupcakes did he eat?
3. Greta ate  $\frac{1}{4}$  of the dozen cupcakes. How many cupcakes did she eat?
4. There were 40 prizes hidden at Anthony's party. Nancy found  $\frac{1}{4}$  of the prizes. Justin found  $\frac{1}{8}$  of the prizes. Who found more prizes?

Beth found  $\frac{2}{5}$  of the remaining prizes. How many prizes did she find?

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Name \_\_\_\_\_ Date \_\_\_\_\_

Mathematics Problem Solving  
Volume 5, Number 7, October 18, 1999  
www.rhlschool.com

### How Can You Solve It?

**1. Pamela has grown a 1,214 pound pumpkin. She's very proud of it because the heaviest pumpkin she ever grew before weighed 34 pounds. She wants to tell her friends how many 34 pound pumpkins it would take to weigh as much as her new record setter. What is the best way to figure that out?**

- She should pile pumpkins that weigh 34 pounds on her bathroom scale until they weigh at least 1,214 pounds altogether.
- She should subtract 34 from 1,214.
- She should multiply 1,214 by 34.
- She should divide 1,214 by 34.
- She does not have enough information to figure it out.

**2. Cheryl is going to bake 180 cupcakes for her Halloween party. Her recipe, for a dozen cupcakes, calls for two eggs. Which of the following methods should she use to figure out how many eggs she'll need to make the 180 cupcakes?**

- She should just use 2 eggs and then observe how badly the cupcakes turn out.
- She should divide 180 by 2.
- She should multiply 180 by 2.
- She should divide 180 by 12 and then multiply that number by 2.
- She should multiply 180 by 12 and then add 2 to that number.

**3. Robert has just finished picking a basket of apples. He knows that he has exactly 51 apples. The apples will cost 50 cents a pound. Robert wants to know exactly how much the apples will cost before he pays the orchard owner. Using a calculator or just pencil and paper, what can you do to figure out the exact cost?**

- You can multiply \$ .50 by 51.
- You can divide 51 by 16 and then multiply that number by \$ .50.
- You can tell Robert to eat one apple so that the answer can come out even.
- You can multiply \$ .50 by the product of 51 and 16.
- You don't have enough information to figure out the answer.



**4. Ryan wants to buy a gallon of cider. The cider costs seven dollars in a gallon container and \$ 2.27 in a quart container. Ryan knows that four quarts equal one gallon and four quart containers would fit better in his refrigerator. However, he wants to know how much money he can save by purchasing the gallon container instead. How can he figure that out?**

- He can multiply 4 by \$ 2.27 and then subtract \$ 7.00 from that amount.
- He can add \$ 2.27 and \$ 7.00 and then divide that amount by 4.
- He can buy five quarts and then subtract \$ 7.00 from whatever they cost.
- He does not have enough information to figure it out.
- He can multiply \$ 7.00 by 4 and then divide by \$ 2.27.

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Name \_\_\_\_\_ Date \_\_\_\_\_  
Mathematics Problem Solving  
Volume 3, Number 4, September 29, 1997  
www.rhlschool.com

How Old?

1. French actress Brigitte Bardot was born on September 28, 1934. How old is she?
- x
- x
2. Telephone service between the United States and Mexico began 70 years ago. In what year did it begin?
3. Arnold was born on April 1, 1956. Tina was born on April 1, 1940. Who is older? How much older?
- x
- x
4. Today is Samantha's 21st birthday. In what year was she born?
- x
- x
5. Sam was born on September 29, 1992. How old will he be in three years?
- x
- x
6. Ashley was born in September of 1980. Kevin is six years older than Ashley. How old is Kevin?
- x
- x



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Mathematics Problem Solving  
Volume 6, Number 12, December 7, 2000  
www.rhlschool.com

## It's Time for Time

1. Allen wakes up at 7:00 in the morning to get ready for school. At 8:15 he's ready to go out the door and get on the school bus. How long does it take him to get ready?



2. Emily can't wait to watch the next episode of her favorite TV show, Carpet Mice. It's six o'clock in the evening and the show will be starting in one and a half hours. What time will the show begin?

3. The time is three hours earlier in California than in New York. If a live sports event that begins in New York at 8:00 p.m. is being shown on television and it ends when it's 7:00 p.m. in California, how long does the event last?

4. If a movie is 125 minutes long, it still has \_\_\_\_\_ minutes to run after two hours.

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**Mathematics Problem Solving**  
**Volume 4, Number 20, February 8, 1999**  
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## Perimeters and Shapes

*Use a dictionary or the glossary of your math textbook to help you with any words that are new to you.*







1. What is the perimeter of a regular hexagon that is four inches long on each side?
  
2. If a square had the same perimeter as the above hexagon, how long would each side be?
  
3. How long is each side of a regular pentagon if the pentagon's perimeter is 60 meters?
  
4. Ryan made a rectangle out of construction paper. The perimeter of the rectangle was 20 centimeters. Ryan measured one of the sides and found it to be 7 centimeters long.  
 Cheryl made a rectangle out of construction paper. It also had a perimeter of 20 centimeters.  
 Only one of the rectangles was a square. Was it Ryan's or Cheryl's?
  
5. Michael made a regular octagon out of cardboard. It had a perimeter of 56 inches. Anne also made a regular octagon. Each side of her octagon was 7 inches long. Which one of the following must be true?
  - a. Both figures were made out of cardboard.
  - b. Both figures were perpendicular.
  - c. Both figures were asymmetric.
  - d. Both figures were congruent.
  - e. None of the above.

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# Compare and Order Whole Numbers

**Review**      The answer key for this lesson is on the last page.

To **compare** whole numbers:

1. Check to see if one of the numbers has a numeral in a greater place value than the other number.
2. If not, then compare the numerals that are in the greatest place values.
3. Continue to compare the numerals in the greatest place values that have not been compared until one of the numbers is determined to be greater than (or less than) the other number. If the numerals are all the same in the same place values, then the numbers are equal.

To **order** whole numbers, continue this process with pairs of numbers until all the numbers are ordered.

## Example A

Compare 1,307 and 137.

<b>STEP 1</b>	Find the greatest place value of the first number.	thousands
<b>STEP 2</b>	Find the greatest place value of the second number.	hundreds
<b>STEP 3</b>	Are the place values equal?	no
<b>STEP 4</b>	Choose the number with the greater place value.	1,307

So, 1,307 is greater than 137.

\*\*\*\*\*

### Example B

Compare 8,375 and 8,735.

<b>STEP 1</b>	Find the greatest place value of the first number.	thousands
<b>STEP 2</b>	Find the greatest place value of the second number.	thousands
<b>STEP 3</b>	Are the place values equal?	yes
<b>STEP 4</b>	Are the numerals in the thousands place equal?	$8 = 8$ ; yes
<b>STEP 5</b>	What is the next place value?	hundreds
<b>STEP 6</b>	Are the numerals in the hundreds place equal?	$3 \neq 7$ ; no
<b>STEP 7</b>	Which numeral has the lesser value?	3
<b>STEP 8</b>	Choose the number with the lesser value in the hundreds place.	8,375

So, 8,375 is less than 8,735.

\*\*\*\*\*

### **Guided Practice**

**Order these numbers from greatest to least: 382, 3,281, 3,821, 8,123.**

What is the greatest place value that occurs in any of these numbers?

\_\_\_\_\_

Compare the numerals in the thousands place. Which number in the thousands place has the greatest value? \_\_\_\_\_

Since only one number has the greatest value, in the thousands place, \_\_\_\_\_ is the greatest number.

Which remaining two numbers have numerals in the thousands place?  
\_\_\_\_\_ and \_\_\_\_\_

Since the numerals in the thousands place are equal, which place value should be compared next? \_\_\_\_\_

Compare the numerals in the hundreds place. Which number in the hundreds place has the greatest value? \_\_\_\_\_

Since only one number has the greatest value in the hundreds place, \_\_\_\_\_ is the next greatest number.

What is the only remaining number that has a numeral in the thousands place?  
\_\_\_\_\_

The only remaining number is the least of the four numbers. It is \_\_\_\_\_.

The numbers from greatest to least are \_\_\_\_\_, \_\_\_\_\_,  
\_\_\_\_\_, \_\_\_\_\_.

### **Practice**

1. Compare 1,789 and 1,879. Which number has the lesser value?
2. Order these numbers from greatest to least: 546, 645, 456, 4,566.

### **Quiz**

1. Compare 357 and 492. Which number has the greater value and why?
  - A. 357 because 7 is greater than 2
  - B. 357 because 9 is greater than 5
  - C. 492 because 4 is greater than 3
  - D. 492 because 9 is greater than 5
2. Compare 8,432 and 8,071. Which number has the lesser value and why?
  - F. 8,071 because 0 is less than 4
  - G. 8,071 because 1 is less than 2
  - H. 8,432 because 3 is less than 7
  - J. 8,432 because 4 is less than 7
3. Order these numbers from least to greatest: 386, 492, 429, 836.
  - A. 386, 492, 429, 836
  - B. 386, 429, 492, 836
  - C. 429, 836, 386, 492
  - D. 492, 836, 386, 429
4. Order these numbers from greatest to least: 5,032, 5,302, 5,203, 2,503.
  - F. 2,503, 5,302, 5,203, 5,032
  - G. 2,503, 5,032, 5,203, 5,302
  - H. 5,032, 5,302, 5,203, 2,503
  - J. 5,302, 5,203, 5,032, 2,503

## **Answer Key**

### **Guided Practice**

thousands

8

8,123

3,281, 3,821

hundreds

8

3,821

3,281

382

8,123, 3,821, 3,281, 382

### **Practice**

1. 1,789

2. 4,566, 645, 546, 456

### **Quiz**

1. C. 492 because 4 is greater than 3

2. F. 8,071 because 0 is less than 4

3. B. 386, 429, 492, 836

4. J. 5,302, 5,203, 5,032, 2,503

# Identify Equivalent Arithmetic Expressions

**Review**      The answer key for this lesson is on the last page.

Numbers can be written in different ways, so they look different but the value remains the same.

## Example A

What is the expanded form of 782, written with words?

<b>Step 1</b>	Decide what the greatest place value is in the number	the number to the far left is in the hundreds place.
<b>Step 2</b>	Decide how many are in the hundreds place.	there are 7 hundreds
<b>Step 3</b>	Decide how many are in the tens place (the next place value)	there are 8 tens
<b>Step 4</b>	Decide how many are in the ones place (the next place value)	there are 2 ones
<b>Step 5</b>	Rewrite the number in expanded form with words	7 hundreds 8 tens 2 ones

The number 782 can be written as 7 hundreds 8 tens 2 ones.

\*\*\*\*\*

## Example B

What is the expanded form of 2,403, written with numbers?

<b>Step 1</b>	Decide what the greatest place value is in the number	the number to the far left is in the thousands place.
<b>Step 2</b>	Decide how many are in the thousands place.	there are 2 thousands or 2,000
<b>Step 3</b>	Decide how many are in the hundreds place (the next place value)	there are 4 hundreds or 400
<b>Step 4</b>	Decide how many are in the tens place (the next place value)	there are 0 tens or 0
<b>Step 5</b>	Decide how many are in the ones place (the next place value)	there are 3 ones or 3
<b>Step 6</b>	Rewrite the number in expanded form with numbers	$2,000 + 400 + 0 + 3$

The number 2,403 can be written as  $2,000 + 400 + 3$ .

\*\*\*\*\*

### **Guided Practice**

**What is the expanded form of 7,061, written with numbers?**

What is the highest place value in the number? \_\_\_\_\_

How many are in the highest place value? \_\_\_\_\_

What is the next highest place value in the number? \_\_\_\_\_

How many are in this place value? \_\_\_\_\_

What is the next highest place value in the number? \_\_\_\_\_

How many are in this place value? \_\_\_\_\_

What is the next highest place value in the number? \_\_\_\_\_

How many are in this place value? \_\_\_\_\_

Rewrite the number in expanded form with numbers.

\_\_\_\_\_

So, the number 7,061 can be written as \_\_\_\_\_.

### **Practice**

1. What is the expanded form of 809 written with words?
2. What is the expanded form of 3,410 written with numbers?



## **Quiz**

1. What is 310 written with words?
  - A. 3 thousands 1 hundred
  - B. 3 hundreds 1 ten
  - C. 3 hundreds 1 one
  - D. 3 tens 1 one
  
2. What is 7,142 written with words?
  - F. 7 thousands 4 hundreds 2 tens 1 one
  - G. 7 thousands 1 hundred 4 tens 2 ones
  - H. 2 thousands 4 hundreds 1 ten 7 ones
  - J. 1 thousand 2 hundreds 4 tens 7 ones
  
3. What is the expanded form of 485 written with numbers?
  - A.  $800 + 50 + 4$
  - B.  $800 + 40 + 5$
  - C.  $400 + 80 + 5$
  - D.  $400 + 50 + 8$
  
4. What is the expanded form of 8,091 written with numbers?
  - F.  $8,000 + 900 + 10$
  - G.  $8,000 + 900 + 1$
  - H.  $8,000 + 90 + 1$
  - J.  $800 + 90 + 1$

## **Answer Key**

### **Guided Practice**

thousands

7

0

6

1

$$7,000 + 60 + 1$$

$$7,000 + 60 + 1$$

### **Practice**

1. 8 hundreds 9 ones

2.  $3,000 + 400 + 10$

### **Quiz**

1. B. 3 hundreds 1 ten

2. G. 7 thousands 1 hundred 4 tens 2 ones

3. C.  $400 + 80 + 5$

4. H.  $8,000 + 90 + 1$

## Represent Data with Appropriate Title and Key

**Review**      The answer key for this lesson is on the last page.

For data to be communicated clearly, it must be organized and labeled correctly and completely.

A graph should have:

- a **title** that tells what the overall focus of the data is
- **labels** that tell what the different parts of the graph represent (some types of data formats only have one label)
- a **key** that tells how the data is being represented, such as a book symbol in a pictograph that represents five books read (for some formats, the key is included on the graph as a scale, such as a bar graph)

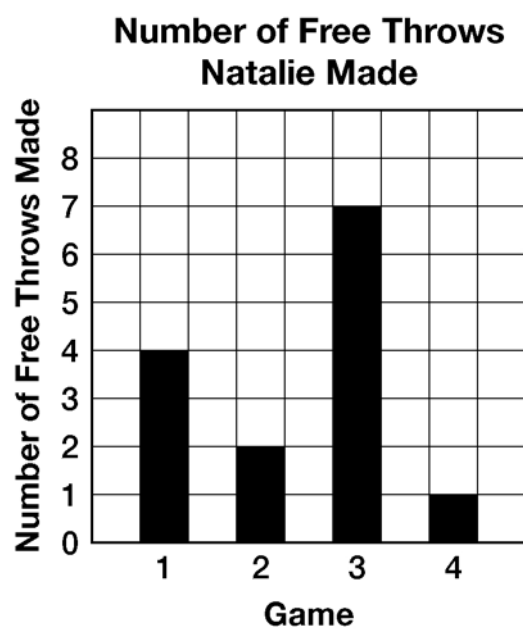
### Example A

Natalie collected data from the basketball games she played. Put the data in the table into a bar graph.

**Number of Free Throws Natalie Made**

Game	Number of Free Throws Made
1	4
2	2
3	7
4	1

- |               |                                                           |                                                                       |
|---------------|-----------------------------------------------------------|-----------------------------------------------------------------------|
| <b>STEP 1</b> | What is the title for the data?                           | Number of Free Throws Natalie Made                                    |
| <b>STEP 2</b> | What data label should go across the bottom of the graph? | Game                                                                  |
| <b>STEP 3</b> | What data label should go on the left side of the graph?  | Number of Free Throws Made                                            |
| <b>STEP 4</b> | What is the scale for the data?                           | many choices, including labeling the left side of the graph by 1 or 2 |



\*\*\*\*\*

### **Guided Practice**

Jaime wrote the number of CDs he bought each month from January through May in a table. Put the data from the table into a pictograph with a key of  $\square = 2 \text{ CDs}$ .

**Number of CDs Bought  
Each Month**

Month	Number of CDs Bought
January	7
February	4
March	3
April	6
May	3

What is the title for the data? \_\_\_\_\_

What label should go on the left side of the pictograph? \_\_\_\_\_

What information should go in the key for the pictograph?

\_\_\_\_\_

Check to make sure that you graphed all the data appropriately.

### **Practice**

Mr. Juarez wrote the number of movies his family rented each month in a table. Put the data from the table into a bar graph with a scale of 1.

**Number of Movies Rented  
Each Month**

Month	Number of Movies Rented
1	6
2	3
3	4
4	1

### **Quiz**

Emily kept track of how many bunnies were at the pet shop on three days. Put the data from the table into a pictograph with a key of 5.

**Number of Bunnies at the  
Pet Shop Each Day**

Day	Number of Bunnies
1	5
2	15
3	10

## Answer Key

### Guided Practice

#### Number of CDs Bought Each Month

Month	Number of CDs Bought
January	⊙ ⊙ ⊙ ∩
February	⊙ ⊙
March	⊙ ∩
April	⊙ ⊙ ⊙
May	⊙ ∩

#### Key

⊙ = 2 CDs

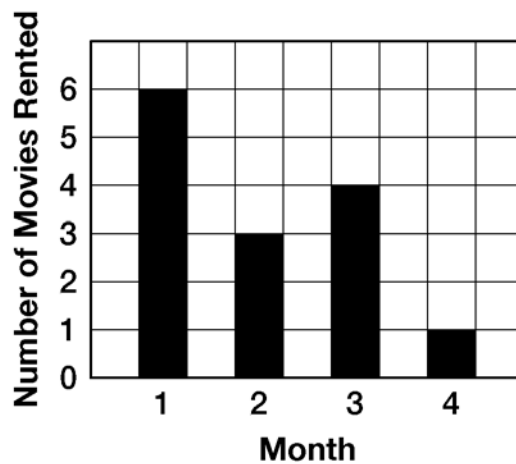
Number of CDs Bought Each Month

Month

⊙ = 2 CDs

### Practice







#### Number of Movies Rented Each Month






## Quiz

### Number of Bunnies at Pet Shop Each Day

Day	Number of Bunnies
1	
2	  
3	 

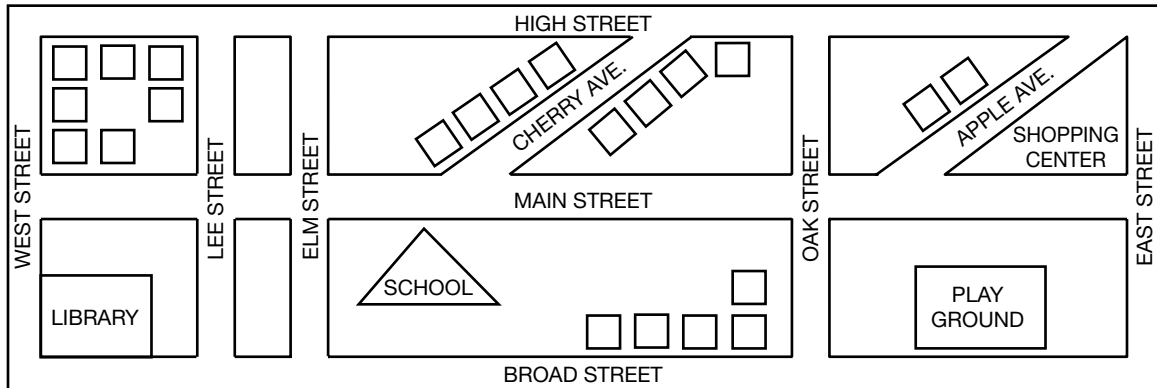
### Key

 = 5 bunnies
-----------------------------------------------------------------------------------------------

Name \_\_\_\_\_

## Lines and Line Segments

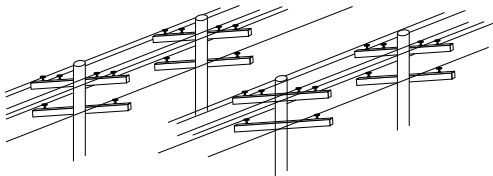
**Geography** A street map helps people find their way around a town or city. It provides a bird's-eye view so that the relationships of the street and the patterns they make become easier to remember. Use the street map below to answer the questions.



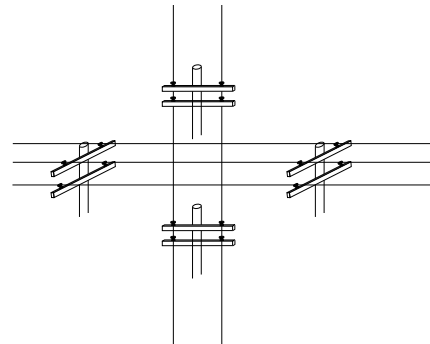
1. Which streets are parallel to Oak Street?  
\_\_\_\_\_
2. Which street is parallel to Apple Avenue? \_\_\_\_\_
3. Elm Street is perpendicular to which streets? \_\_\_\_\_
4. Which building marks the point where Broad Street and West Street intersect?  
\_\_\_\_\_

Write if the electrical wires for each pair of poles appear to be parallel or perpendicular.

5.



6.



Name \_\_\_\_\_

## Patterns in Numbers

Write what comes next in each pattern. Then describe the rule (there may be more than one rule).

1. 1, 4, 9, 16, 25, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Rule: \_\_\_\_\_

\_\_\_\_\_

2. 0, 3, 8, 15, 24, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Rule: \_\_\_\_\_

\_\_\_\_\_

3. 0, 2, 6, 12, 20, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Rule: \_\_\_\_\_

\_\_\_\_\_

4. 2, 6, 12, 20, 30, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Rule: \_\_\_\_\_

\_\_\_\_\_

5. 2, 4, 6, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Rule: \_\_\_\_\_

\_\_\_\_\_

6. 81, 64, 49, 36, 25, 16, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Rule: \_\_\_\_\_

\_\_\_\_\_

7. 78, 61, 46, 33, 22, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

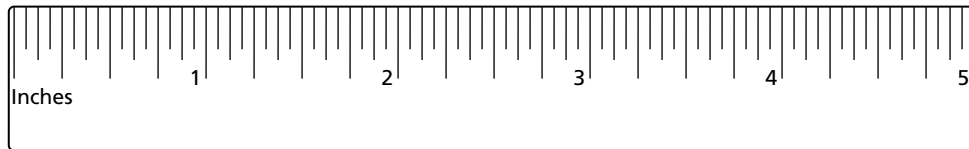
Rule: \_\_\_\_\_

\_\_\_\_\_

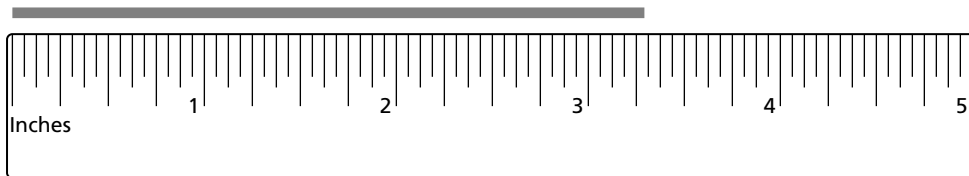
## Topic 4: Using Fractions of an Inch and Converting Measurements

---

Many rulers are numbered in inches, but they have other marks that show fractions of an inch. The marks allow you to measure to the nearest half of an inch, quarter of an inch, eighth of an inch, or sixteenth of an inch.

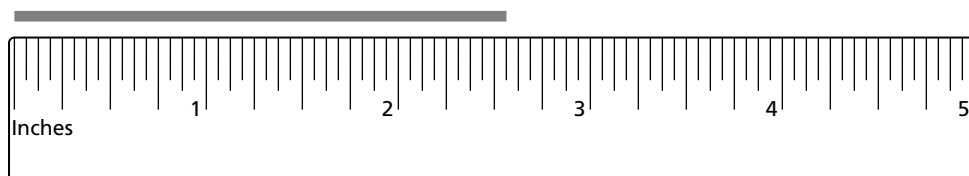


When you measure a length with a ruler, you measure to the nearest fraction of an inch as required. The segment below measures  $3\frac{1}{2}$  inches to the nearest half inch,  $3\frac{1}{4}$  to the nearest quarter inch,  $3\frac{2}{8}$  to the nearest quarter inch, and  $3\frac{5}{16}$  to the nearest sixteenth of an inch.

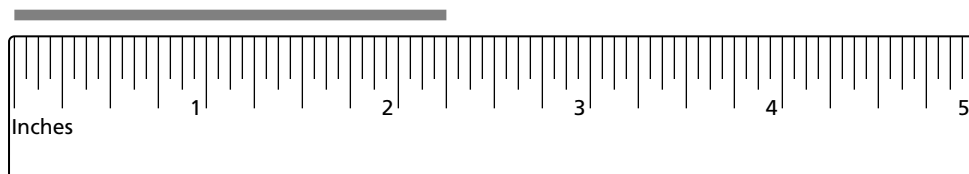


**Find the measure of each segment to the given fraction of an inch.**

1. the nearest sixteenth of an inch

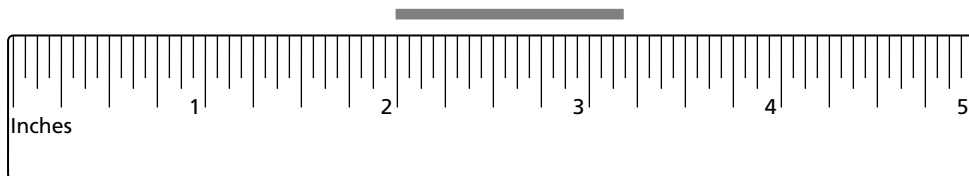


2. the nearest quarter of an inch

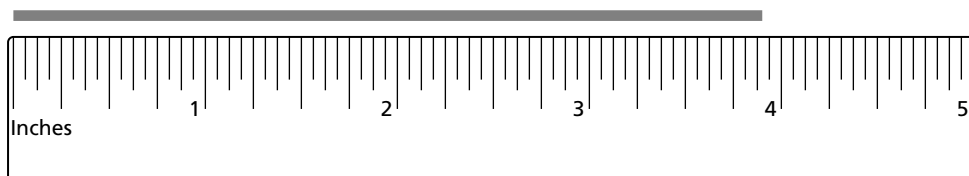


**Find the measure of each segment to the given fraction of an inch.**

- 3.** the nearest half of an inch



- 4.** the nearest eighth of an inch



**Use a ruler to draw each segment.**

- 5.**  $5\frac{1}{2}$  inches

- 6.**  $2\frac{3}{4}$  inches

- 7.**  $\frac{3}{8}$  inch

- 8.**  $\frac{27}{16}$  inches

To solve many problems, you must change units of measurement. To do this, you need to know how units are related. Here are some conversions that may be familiar.

$$12 \text{ inches} = 1 \text{ foot}$$

$$36 \text{ inches} = 1 \text{ yard}$$

$$3 \text{ feet} = 1 \text{ yard}$$

$$5,280 \text{ feet} = 1 \text{ mile}$$

$$100 \text{ centimeters} = 1 \text{ meter}$$

$$10 \text{ millimeters} = 1 \text{ centimeter}$$

$$1,000 \text{ millimeters} = 1 \text{ meter}$$

**For Exercises 9–16, copy and complete each conversion.**

**Sample** 15 feet = ■ yards

Since 3 feet = 1 yard, divide the number of feet by 3 to find the number of yards.

$$\frac{15}{3} = 5$$

There are 5 yards in 15 feet.

- |                                          |                                            |
|------------------------------------------|--------------------------------------------|
| <b>9.</b> 33 feet = ■ yards              | <b>10.</b> 4 feet = ■ inches               |
| <b>11.</b> $6\frac{1}{3}$ yards = ■ feet | <b>12.</b> 18 inches = ■ feet              |
| <b>13.</b> 2 meters = ■ centimeters      | <b>14.</b> 200 millimeters = ■ centimeters |
| <b>15.</b> 500 centimeters = ■ meters    | <b>16.</b> 20 centimeters = ■ millimeters  |

**Tell which measure is greater or state that the measures are the same.**

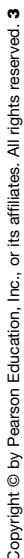
**Explain.**

- |                                        |                                         |
|----------------------------------------|-----------------------------------------|
| <b>17.</b> 6 centimeters or 6 meters   | <b>18.</b> 3 feet or 3 inches           |
| <b>19.</b> 50 millimeters or 5 meters  | <b>20.</b> 50 centimeters or 5 meters   |
| <b>21.</b> 500 centimeters or 5 meters | <b>22.</b> 500 centimeters or 50 meters |
| <b>23.</b> 96 inches or 6 feet         | <b>24.</b> 96 inches or 6 yards         |

## Tools and Units for Perimeter

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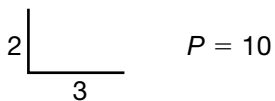


Name \_\_\_\_\_

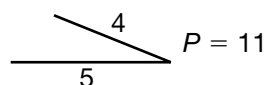
# All the Way Around

For each exercise, complete the figure by drawing a polygon with the perimeter shown. Write the length of each side of your polygon.

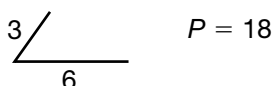
1.



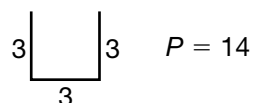
2.



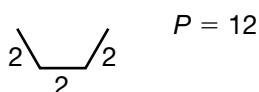
3.



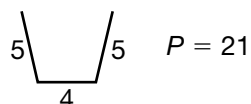
4.



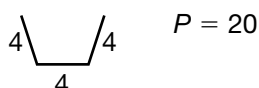
5.



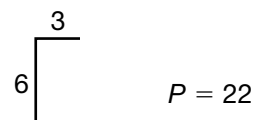
6.



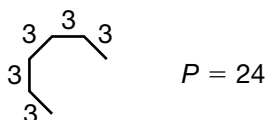
7.



8.



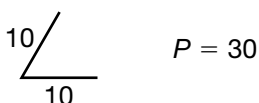
9.



10.



11.





**Adding with 100, 1,000, and 10,000****Worksheet 2**

Name \_\_\_\_\_

Write the answer to each problem in the blank.

1.)  $7,074 + 100 =$  \_\_\_\_\_

2.)  $4,920 + 1,000 =$  \_\_\_\_\_

3.)  $66,172 + 10,000 =$  \_\_\_\_\_

4.)  $1,000 + 17,758 =$  \_\_\_\_\_

5.)  $1,000 + 1,580 =$  \_\_\_\_\_

6.)  $95,551 + 100 =$  \_\_\_\_\_

7.)  $95,902 + 100 =$  \_\_\_\_\_

8.)  $1,000 + 9,358 =$  \_\_\_\_\_

9.)  $70,915 + 10,000 =$  \_\_\_\_\_

10.)  $1,000 + 49,289 =$  \_\_\_\_\_

11.)  $100 + 8,397 =$  \_\_\_\_\_

12.)  $1,668 + 1,000 =$  \_\_\_\_\_

13.)  $11,593 + 100 =$  \_\_\_\_\_

14.)  $3,976 + 1,000 =$  \_\_\_\_\_

15.)  $10,000 + 19,409 =$  \_\_\_\_\_

16.)  $29,978 + 100 =$  \_\_\_\_\_

17.)  $8,428 + 1,000 =$  \_\_\_\_\_

18.)  $100 + 1,460 =$  \_\_\_\_\_

19.)  $97,088 + 100 =$  \_\_\_\_\_

20.)  $4,341 + 100 =$  \_\_\_\_\_

21.)  $10,000 + 81,982 =$  \_\_\_\_\_

22.)  $52,718 + 1,000 =$  \_\_\_\_\_

23.)  $100 + 5,193 =$  \_\_\_\_\_

24.)  $1,000 + 29,528 =$  \_\_\_\_\_

25.)  $31,951 + 100 =$  \_\_\_\_\_

26.)  $1,511 + 1,000 =$  \_\_\_\_\_

27.)  $90,493 + 10,000 =$  \_\_\_\_\_

28.)  $93,476 + 100 =$  \_\_\_\_\_

29.)  $1,000 + 1,546 =$  \_\_\_\_\_

30.)  $12,483 + 100 =$  \_\_\_\_\_

**Subtracting 100, 1,000, and 10,000****Worksheet 1**

Name \_\_\_\_\_

Write the answer to each problem in the blank.

1.)  $1,191 - 100 =$  \_\_\_\_\_

2.)  $7,055 - 100 =$  \_\_\_\_\_

3.)  $25,356 - 10,000 =$  \_\_\_\_\_

4.)  $3,583 - 100 =$  \_\_\_\_\_

5.)  $5,449 - 1,000 =$  \_\_\_\_\_

6.)  $50,878 - 10,000 =$  \_\_\_\_\_

7.)  $6,080 - 100 =$  \_\_\_\_\_

8.)  $1,909 - 1,000 =$  \_\_\_\_\_

9.)  $33,582 - 10,000 =$  \_\_\_\_\_

10.)  $50,521 - 1,000 =$  \_\_\_\_\_

11.)  $6,611 - 100 =$  \_\_\_\_\_

12.)  $1,605 - 100 =$  \_\_\_\_\_

13.)  $4,118 - 1,000 =$  \_\_\_\_\_

14.)  $3,252 - 100 =$  \_\_\_\_\_

15.)  $34,072 - 10,000 =$  \_\_\_\_\_

16.)  $32,226 - 10,000 =$  \_\_\_\_\_

17.)  $2,238 - 1,000 =$  \_\_\_\_\_

18.)  $4,462 - 1,000 =$  \_\_\_\_\_

19.)  $53,296 - 100 =$  \_\_\_\_\_

20.)  $4,157 - 1,000 =$  \_\_\_\_\_

21.)  $59,458 - 10,000 =$  \_\_\_\_\_

22.)  $88,070 - 10,000 =$  \_\_\_\_\_

23.)  $9,172 - 1,000 =$  \_\_\_\_\_

24.)  $10,826 - 1,000 =$  \_\_\_\_\_

25.)  $50,060 - 100 =$  \_\_\_\_\_

26.)  $3,285 - 100 =$  \_\_\_\_\_

27.)  $77,817 - 10,000 =$  \_\_\_\_\_

28.)  $15,388 - 10,000 =$  \_\_\_\_\_

29.)  $4,442 - 1,000 =$  \_\_\_\_\_

30.)  $7,591 - 100 =$  \_\_\_\_\_

**Subtracting 100, 1,000, and 10,000****Worksheet 2**

Name \_\_\_\_\_

Write the answer to each problem in the blank.

1.)  $17,543 - 100 =$  \_\_\_\_\_

2.)  $8,898 - 100 =$  \_\_\_\_\_

3.)  $81,544 - 10,000 =$  \_\_\_\_\_

4.)  $9,840 - 1,000 =$  \_\_\_\_\_

5.)  $7,529 - 1,000 =$  \_\_\_\_\_

6.)  $60,418 - 10,000 =$  \_\_\_\_\_

7.)  $10,048 - 100 =$  \_\_\_\_\_

8.)  $7,250 - 100 =$  \_\_\_\_\_

9.)  $31,756 - 10,000 =$  \_\_\_\_\_

10.)  $10,480 - 1,000 =$  \_\_\_\_\_

11.)  $1,737 - 100 =$  \_\_\_\_\_

12.)  $9,200 - 100 =$  \_\_\_\_\_

13.)  $51,739 - 10,000 =$  \_\_\_\_\_

14.)  $9,448 - 100 =$  \_\_\_\_\_

15.)  $51,465 - 10,000 =$  \_\_\_\_\_

16.)  $45,693 - 1,000 =$  \_\_\_\_\_

17.)  $1,594 - 100 =$  \_\_\_\_\_

18.)  $3,184 - 1,000 =$  \_\_\_\_\_

19.)  $45,556 - 1,000 =$  \_\_\_\_\_

20.)  $6,514 - 100 =$  \_\_\_\_\_

21.)  $94,575 - 10,000 =$  \_\_\_\_\_

22.)  $71,970 - 1,000 =$  \_\_\_\_\_

23.)  $7,460 - 100 =$  \_\_\_\_\_

24.)  $10,215 - 1,000 =$  \_\_\_\_\_

25.)  $39,095 - 100 =$  \_\_\_\_\_

26.)  $3,383 - 1,000 =$  \_\_\_\_\_

27.)  $69,243 - 10,000 =$  \_\_\_\_\_

28.)  $31,221 - 10,000 =$  \_\_\_\_\_

29.)  $6,673 - 100 =$  \_\_\_\_\_

30.)  $57,402 - 1,000 =$  \_\_\_\_\_

**100, 1,000, or 10,000 more or less****Worksheet 1**

Name \_\_\_\_\_

Write the answer to each problem in the blank.

1.)  $4,373 + 1,000 =$  \_\_\_\_\_

2.)  $12,960 - 10,000 =$  \_\_\_\_\_

3.)  $100 + 8,981 =$  \_\_\_\_\_

4.)  $1,000 + 12,574 =$  \_\_\_\_\_

5.)  $4,032 - 1,000 =$  \_\_\_\_\_

6.)  $9,558 + 1,000 =$  \_\_\_\_\_

7.)  $48,429 + 100 =$  \_\_\_\_\_

8.)  $1,000 + 2,390 =$  \_\_\_\_\_

9.)  $100 + 1,909 =$  \_\_\_\_\_

10.)  $86,590 - 1,000 =$  \_\_\_\_\_

11.)  $10,659 - 1,000 =$  \_\_\_\_\_

12.)  $8,224 - 1,000 =$  \_\_\_\_\_

13.)  $40,805 - 10,000 =$  \_\_\_\_\_

14.)  $10,000 + 15,137 =$  \_\_\_\_\_

15.)  $89,083 + 1,000 =$  \_\_\_\_\_

16.)  $5,914 + 100 =$  \_\_\_\_\_

17.)  $10,000 + 94,825 =$  \_\_\_\_\_

18.)  $5,524 - 100 =$  \_\_\_\_\_

19.)  $5,018 - 100 =$  \_\_\_\_\_

20.)  $1,000 + 69,581 =$  \_\_\_\_\_

21.)  $62,024 + 10,000 =$  \_\_\_\_\_

22.)  $5,218 + 1,000 =$  \_\_\_\_\_

23.)  $99,948 + 10,000 =$  \_\_\_\_\_

24.)  $100 + 49,949 =$  \_\_\_\_\_

25.)  $80,563 - 100 =$  \_\_\_\_\_

26.)  $36,068 - 100 =$  \_\_\_\_\_

27.)  $1,000 + 9,478 =$  \_\_\_\_\_

28.)  $44,931 + 100 =$  \_\_\_\_\_

29.)  $1,694 + 100 =$  \_\_\_\_\_

30.)  $100 + 42,662 =$  \_\_\_\_\_

**100, 1,000, or 10,000 more or less****Worksheet 2**

Name \_\_\_\_\_

Write the answer to each problem in the blank.

1.)  $1,605 + 1,000 =$  \_\_\_\_\_

2.)  $85,946 - 10,000 =$  \_\_\_\_\_

3.)  $100 + 4,497 =$  \_\_\_\_\_

4.)  $1,000 + 76,112 =$  \_\_\_\_\_

5.)  $7,034 - 1,000 =$  \_\_\_\_\_

6.)  $9,402 + 1,000 =$  \_\_\_\_\_

7.)  $22,795 + 100 =$  \_\_\_\_\_

8.)  $1,000 + 7,163 =$  \_\_\_\_\_

9.)  $100 + 5,988 =$  \_\_\_\_\_

10.)  $40,723 - 1,000 =$  \_\_\_\_\_

11.)  $70,574 - 1,000 =$  \_\_\_\_\_

12.)  $1,907 - 1,000 =$  \_\_\_\_\_

13.)  $10,423 - 10,000 =$  \_\_\_\_\_

14.)  $10,000 + 63,369 =$  \_\_\_\_\_

15.)  $29,194 + 1,000 =$  \_\_\_\_\_

16.)  $8,909 + 100 =$  \_\_\_\_\_

17.)  $10,000 + 98,630 =$  \_\_\_\_\_

18.)  $5,063 - 100 =$  \_\_\_\_\_

19.)  $1,096 - 100 =$  \_\_\_\_\_

20.)  $1,000 + 49,658 =$  \_\_\_\_\_

21.)  $92,560 + 10,000 =$  \_\_\_\_\_

22.)  $22,991 + 1,000 =$  \_\_\_\_\_

23.)  $96,805 + 10,000 =$  \_\_\_\_\_

24.)  $100 + 96,913 =$  \_\_\_\_\_

25.)  $42,232 - 100 =$  \_\_\_\_\_

26.)  $71,040 - 100 =$  \_\_\_\_\_

27.)  $1,000 + 9,426 =$  \_\_\_\_\_

28.)  $61,908 + 100 =$  \_\_\_\_\_

29.)  $3,890 + 100 =$  \_\_\_\_\_

30.)  $100 + 19,438 =$  \_\_\_\_\_

## Tools for Measuring Distances Around Objects

### Explanation

- A) Tools can be used to measure various attributes, such as temperature, time, weight, or distance.
- B) The distance around an object is called the perimeter.
- C) Your task on this worksheet is to choose the tools that should be used to measure the perimeter of various objects.

### Examples

1. Which tool should be used to measure the perimeter of a rectangular picture frame?

Thermometer      ...or...      Ruler

**Ruler. A thermometer should be used to measure temperature. The ruler could be used to measure each side of the picture frame and then the measures could be added to find the perimeter.**

---

2. Which pair of tools should be used to measure the distance around a tire?

Ribbon and yardstick      ...or...      Stopwatch and measuring spoon

**Ribbon and yardstick. The flexible ribbon could be wrapped around the outside of the tire once and then straightened out to be measured with the yardstick.**

---

3. Which tool should be used to measure the distance around a book?

Tape measure      ...or...      Scale

**Tape measure. The scale should be used to measure weight. The tape measure could be wrapped around the outside of the book once. The distance around the book will be the point on the tape measure where it meets itself.**

---

NAME: \_\_\_\_\_

**Practice**

1. Which tool should be used to measure the perimeter of a rectangular rug?

Microphone  
Measuring spoon  
Telescope  
Ruler  
Camera

\_\_\_\_\_

2. Which tool should be used to measure the perimeter of a tree?

Hourglass  
Prism  
Loudspeaker  
Bubble level  
Tape measure

\_\_\_\_\_

3. Which pair of tools should be used to measure the distance around a jug of milk?

String and ruler  
Microscope and clock  
Thermometer and calendar  
Timer and measuring cup  
Scale and microphone

\_\_\_\_\_

4. Which tool should be used to measure the distance around a refrigerator?

Measuring cup  
Meter stick  
Speedometer  
Sundial  
Calendar

\_\_\_\_\_

NAME: \_\_\_\_\_

5. Which tool should be used to measure the perimeter of a rectangular window?

Eyedropper  
Compass  
Yardstick  
Stopwatch  
Clock

\_\_\_\_\_

### **Quiz**

1. Which tool should be used to measure the distance around an oval tabletop?

Hourglass  
Tape measure  
Measuring spoon

\_\_\_\_\_

2. Which tool should be used to measure the perimeter of a sheet of newspaper?

Scale  
Timer  
Ruler

\_\_\_\_\_

3. Which pair of tools should be used to measure the distance around a two-liter bottle?

String and yardstick  
Telescope and compass  
Ribbon and calendar

\_\_\_\_\_



## Ways to Measure Distance Around Objects

### Explanation

- A) Tools can be used to measure various attributes, such as temperature, time, weight, or distance.
- B) The distance around an object is called the perimeter.
- C) Your task on this worksheet is to choose the ways that should be used to measure the perimeter of various objects.

### Examples

1. Which way should be used to measure the perimeter of a sheet of computer paper?

A. Place toothpicks around the outside edge of the paper and find the total number of toothpicks.

B. Measure each edge of the paper, then add the measures.

**Your answer:**     **B**     (*The paper is in the shape of a rectangle. The edges are the length and width of the rectangle. The perimeter is the sum of the two lengths and the two widths. Using toothpicks would work only if you also had a way to find the length of each toothpick.*)

2. Which way should be used to measure the distance around a toy car?

A. Wrap a strip of paper around the outside of the toy car once, cut where the paper meets itself, and then straighten out the paper and measure its length with a ruler.

B. Place the toy car on a sheet of paper, make a mark on the paper at the front and back of the toy car, and then remove the car and measure the distance between the marks.

**Your answer:**     **A**     (*The strip of paper is like a tape measure without measurement marks. Using the marks at the front and back of the toy car only finds the length of the car, not the distance around the whole car.*)

**Practice**

1. Which way should be used to measure the perimeter of a rectangular place mat?

A. Use a ruler to measure the longest edge of the place mat and multiply by 4.

B. Use a yardstick to measure each edge of the place mat and add all the measures.

C. Use a tape measure to measure from one corner to the opposite corner and multiply by 2.

**Your answer:** \_\_\_\_\_

2. Which way could be used to measure the perimeter of the top of a desk?

A. Place identical toothpicks end-to-end around the outside edge of the top of the desk and find the total number of toothpicks. Use a ruler to measure the length of one toothpick. Multiply the number of toothpicks by the length of one toothpick.

B. Cover the top of the desk with identical playing cards placed edge to edge. Use a ruler to measure the length of one playing card. Multiply the number of playing cards by the length of one playing card.

C. Wrap a ribbon from the center of the top of the desk around to the bottom and back to the center of the top. Cut the ribbon where it meets itself. Straighten the ribbon and measure its length with a meter stick.

**Your answer:** \_\_\_\_\_

3. Which way should be used to measure the distance around a barn door that is square?

A. Measure the bottom edge of the barn door.

B. Measure the bottom edge of the barn door and multiply by 2.

C. Measure the bottom edge of the barn door and multiply by 4.

**Your answer:** \_\_\_\_\_

NAME: \_\_\_\_\_

4. Which way should be used to measure the distance around the oval opening to a wastebasket?

A. Count how many centimeter cubes fit inside the wastebasket.

B. Turn the wastebasket over. Count how many centimeter cubes it takes to completely surround the opening of the wastebasket.

C. Turn the wastebasket over on a sheet of paper. Make a mark on the paper at the front and back of the widest part of the opening of the wastebasket. Remove the wastebasket and count how many centimeter cubes can fit between the marks.

**Your answer:** \_\_\_\_\_

### **Quiz**

1. Which way should be used to measure the distance around a computer keyboard?

A. Wrap a tape measure around the outside edge of the keyboard and read the measurement where the tape meets itself at 0.

B. Place the left edge of the keyboard on the 0 of a meter stick and read the measurement at the right edge of the keyboard.

C. Count the number of keys around the outside edges of the keyboard.

**Your answer:** \_\_\_\_\_

2. Which way should be used to measure the perimeter of a rectangular poster?

A. Use a ruler to measure the length of the poster. Find the sum of two lengths.

B. Use a ruler to measure the width of the poster. Find the sum of two widths.

C. Use a ruler to measure the length and width of the poster. Find the sum of two lengths and two widths.

**Your answer:** \_\_\_\_\_

## Sizes of Fractional Parts 1

### Explanation

- A) When the parts of a whole thing are separated into equal parts, each part is called a fractional part, or just fraction.
- B) The sizes of fractional parts are equivalent (or equal) only when the sizes of the whole things they were separated from are equivalent (or equal).
- C) The value of half of one hundred pennies is equivalent to the value of half of four quarters only because one hundred pennies and four quarters are both equivalent to one dollar. Half of a dollar is equal to a half of a dollar.
- D) But half of a penny is not equivalent to half of a quarter because a penny and a quarter are not equivalent in value.
- E) Your task on this worksheet is to describe whether the given fractional part is equivalent to, or more than, or less than the other given fractional part.

### Examples

Underline the phrase that describes the relationship between the given fractional parts.

1.	$\frac{1}{2}$ of 100 pennies	is equivalent to is more than <u>is less than</u>	$\frac{1}{2}$ of 10 dimes.
2.	$\frac{3}{4}$ of a sheet of notebook paper	is equivalent to is more than <u>is less than</u>	$\frac{3}{4}$ of a sheet of newspaper.
3.	$\frac{1}{2}$ of a cup	is equivalent to <u>is more than</u> is less than	$\frac{1}{2}$ of a spoonful.
4.	$\frac{1}{3}$ of 1 dozen cookies	is equivalent to is more than <u>is less than</u>	$\frac{1}{3}$ of 1 cookie.

NAME: \_\_\_\_\_

### **Practice**

Underline the phrase that describes the relationship between the given fractional parts.

1.	$\frac{1}{2}$ of a dime	is equivalent to is more than is less than	$\frac{1}{2}$ of a dollar.
2.	$\frac{1}{4}$ of a mile	is equivalent to is more than is less than	$\frac{1}{4}$ of an inch.
3.	$\frac{3}{4}$ of the length of a necklace	is equivalent to is more than is less than	$\frac{3}{4}$ of the length of a bracelet.
4.	$\frac{3}{4}$ of sixty minutes	is equivalent to is more than is less than	$\frac{3}{4}$ of an hour.
5.	$\frac{1}{4}$ of the height of a flower	is equivalent to is more than is less than	$\frac{1}{4}$ of the height of a grown tree.
6.	$\frac{1}{3}$ of a candy bar	is equivalent to is more than is less than	$\frac{1}{3}$ of a cake.
7.	$\frac{1}{4}$ of one dollar	is equivalent to is more than is less than	$\frac{1}{4}$ of four quarters.
8.	$\frac{1}{3}$ of three ten-dollar bills	is equivalent to is more than is less than	$\frac{1}{3}$ of three twenty-dollar bills.

NAME: \_\_\_\_\_

### **Quiz**

Underline the phrase that describes the relationship between the given fractional parts.

1.	$\frac{1}{4}$ of a lunch bag	is equivalent to is more than is less than	$\frac{1}{4}$ of a grocery bag.
2.	$\frac{2}{3}$ of 1 day	is equivalent to is more than is less than	$\frac{2}{3}$ of 24 hours.
3.	$\frac{3}{4}$ of 1 month	is equivalent to is more than is less than	$\frac{3}{4}$ of 1 year.
4.	$\frac{1}{3}$ of a yardstick	is equivalent to is more than is less than	$\frac{1}{3}$ of a 12-inch ruler.

## Sizes of Fractional Parts 2

### Explanation

- A) When the parts of a whole thing are separated into equal parts, each part is called a fractional part, or just fraction.
- B) The sizes of fractional parts are equivalent (or equal) only when the sizes of the whole things they were separated from are equivalent (or equal).
- C) The value of half of one hundred pennies is equivalent to the value of half of four quarters only because one hundred pennies and four quarters are both equivalent to one dollar. Half of a dollar is equal to a half of a dollar.
- D) But half of a penny is not equivalent to half of a quarter because a penny and a quarter are not equivalent in value.
- E) Your task on this worksheet is to describe whether the given fractional part is equivalent to, or more than, or less than the other given fractional part.

### Examples

Underline the phrase that describes the relationship between the given fractional parts.

1.	$\frac{1}{2}$ of a large pepperoni pizza	<u>is equivalent to</u> is more than is less than	$\frac{1}{2}$ of a large cheese pizza.
2.	$\frac{3}{4}$ of a drinking straw	is equivalent to is more than <u>is less than</u>	$\frac{3}{4}$ of a garden hose.
3.	$\frac{1}{3}$ of 1 day	<u>is equivalent to</u> is more than is less than	$\frac{1}{3}$ of 24 hours.
4.	$\frac{1}{4}$ of a grocery bag	is equivalent to <u>is more than</u> is less than	$\frac{1}{4}$ of a sandwich bag.

NAME: \_\_\_\_\_

**Practice**

Underline the phrase that describes the relationship between the given fractional parts.

1.	$\frac{1}{2}$ of a spoonful	is equivalent to is more than is less than	$\frac{1}{2}$ of a cup.
2.	$\frac{1}{3}$ of 12 inches	is equivalent to is more than is less than	$\frac{1}{3}$ of 1 foot.
3.	$\frac{3}{4}$ of a year	is equivalent to is more than is less than	$\frac{3}{4}$ of a month.
4.	$\frac{1}{4}$ of one dollar	is equivalent to is more than is less than	$\frac{1}{4}$ of two dollars.
5.	$\frac{1}{2}$ of a day	is equivalent to is more than is less than	$\frac{1}{2}$ of an hour.
6.	$\frac{3}{4}$ of a dozen spoons	is equivalent to is more than is less than	$\frac{3}{4}$ of a dozen forks.
7.	$\frac{1}{3}$ of a yard	is equivalent to is more than is less than	$\frac{1}{3}$ of a foot.
8.	$\frac{1}{4}$ of two dollars	is equivalent to is more than is less than	$\frac{1}{4}$ of two hundred pennies.



NAME: \_\_\_\_\_

### **Quiz**

Underline the phrase that describes the relationship between the given fractional parts.

1.	$\frac{1}{4}$ of an inch	is equivalent to is more than is less than	$\frac{1}{4}$ of a mile.
2.	$\frac{1}{3}$ of a cake	is equivalent to is more than is less than	$\frac{1}{3}$ of a candy bar.
3.	$\frac{3}{4}$ of one hour	is equivalent to is more than is less than	$\frac{3}{4}$ of sixty minutes.
4.	$\frac{1}{2}$ of a dollar	is equivalent to is more than is less than	$\frac{1}{2}$ of a dime.

**Measuring Around Objects – Choose the Objects****Explanation**

- A) Tools can be used to measure various attributes, such as temperature, time, weight, or distance.
- B) The distance around an object is called the perimeter.
- C) Your task on this worksheet is:
- ✓ read a description of a way to measure perimeter
  - ✓ choose the objects from the Answer Box that have perimeters that could be measured that way.

**Example**

Choose the objects from the Answer Box that have perimeters that could be measured the way that is described. Objects can be used for more than one question.

1. A student uses a yardstick to measure each outside edge, then adds the measures.

Which Answer Box objects have a perimeter than can be measured that way?

**rectangular table top, laptop screen**

(technically, the yardstick is not flexible enough to measure around the ball.)

2. A student wraps a measuring tape around the outside and reads the measurement where the tape meets itself at 0.

Which Answer Box objects have a perimeter than can be measured that way?

**ball, rectangular table top, laptop screen, the opening of a sock**

**EXAMPLE ANSWER BOX**

ball	rectangular table top
laptop screen	the opening of a sock

NAME: \_\_\_\_\_

**Practice** - Choose the objects from the Answer Box that have perimeters that could be measured the way that is described. Objects can be used for more than one question.

1. A student wraps a string around the outside so that the string is always touching the edge of the object, marks the point where the string meets itself, then measures that length of string with a ruler.

Which Answer Box objects have a perimeter than can be measured that way?

\_\_\_\_\_

2. A student places one row of identical centimeter cubes around the outside edge so that each cube touches the cubes next to it, then counts the number of cubes.

Which Answer Box objects have a perimeter than can be measured that way?

\_\_\_\_\_

3. A student wraps a measuring tape around the outside, pulls it tight, and reads the measurement where the tape meets itself at 0.

Which Answer Box objects have a perimeter than can be measured that way?

\_\_\_\_\_

4. A student uses a ruler to measure the length and width, then finds the sum of two lengths and two widths.

Which Answer Box objects have a perimeter than can be measured that way?

\_\_\_\_\_

5. A student uses a meter stick to measure each outside edge, then adds the measures.

Which Answer Box objects have a perimeter than can be measured that way?

\_\_\_\_\_

**PRACTICE ANSWER BOX**

business card	bracelet	heart shape
photograph	base of a water bottle	L shape
blanket	DVD	cross-section of a rock

**Quiz**

Choose the objects from the Answer Box that have perimeters that could be measured the way that is described. Objects can be used for more than one question.

1. A student places the object on paper, carefully traces a line around the outside, places one continuous line of identical paper clips lengthwise around the outside edge of the traced line so that each paper clip touches the one next to it, counts the paper clips, and then multiplies the number of paper clips by the length of one paper clip.

Which Answer Box objects have a perimeter than can be measured that way?

\_\_\_\_\_

2. A student uses a ruler to measure the top edge, the bottom edge, and each of the two side edges, then adds the measures.

Which Answer Box objects have a perimeter than can be measured that way?

\_\_\_\_\_

3. A student wraps string around the outside, pulls it tight, cuts the string where it meets itself, then uses a meter stick to measure the cut string.

Which Answer Box objects have a perimeter than can be measured that way?

\_\_\_\_\_

**QUIZ ANSWER BOX**

dollar bill	basket for apples	trapezoid
DVD case	tomato slice	top of a bicycle seat

**BONUS:** Why would a rubber band not make a good tool for measuring perimeter?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Sizes of Fractional Parts – True False**

**Tell whether the following statements about fractional parts are True or False.**

**Examples**

1. Half of a dollar is more money than half of a penny. TRUE  
**The target amount of a dollar is more than the target amount of a penny.**
2. Three-fourths of a cup of water is the same amount of liquid as three-fourths of a cup of juice. TRUE  
**Both target amounts are equivalent to a cup of liquid.**
3. One-third of a set of three golf balls is fewer balls than one-third of a set of three tennis balls. FALSE  
**Both target amounts are equivalent to one ball from a set of three.**

**Practice**

1. One-fourth of one dollar is the same amount of money as one-fourth of one hundred dollars. \_\_\_\_\_
2. One-half of a red gallon pitcher is the same amount of liquid as one-half of a green gallon pitcher. \_\_\_\_\_
3. Three-fourths of a ton is as heavy as three-fourths of a pound. \_\_\_\_\_
4. One-third of a dozen candies is the same number of candies as one-third of twelve candies. \_\_\_\_\_
5. One-half of the wheels on a bicycle is more wheels than one-half of the wheels on a wagon. \_\_\_\_\_
6. One-half of a long trip is shorter than one-half of a short trip. \_\_\_\_\_
7. One-fourth of a large pizza is more than one-fourth of a small pizza. \_\_\_\_\_
8. Three-fourths of a telephone pole is taller than three-fourths of a fence post. \_\_\_\_\_
9. One-third of a pail of water has more water than one-third of a full swimming pool. \_\_\_\_\_

NAME: \_\_\_\_\_

**Quiz**

1. One-third of a one-liter bottle is a smaller amount of liquid than one-third of a two-liter bottle. \_\_\_\_\_
2. One-fourth of 4 two-dollar bills is less money than one-fourth of \$8.00. \_\_\_\_\_
3. Three-fourths of five hundred miles is fewer miles than three-fourths of one hundred miles. \_\_\_\_\_

NAME: \_\_\_\_\_

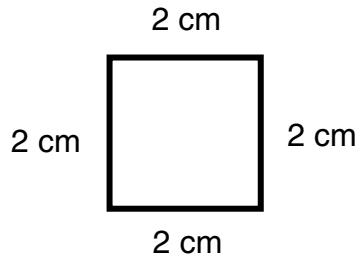
## Perimeter

For each of the following figures:

Write “yes” in any box that describes a correct way to find the perimeter of the figure.

Write “no” in any box that does not describe a correct way to find the perimeter of the figure.

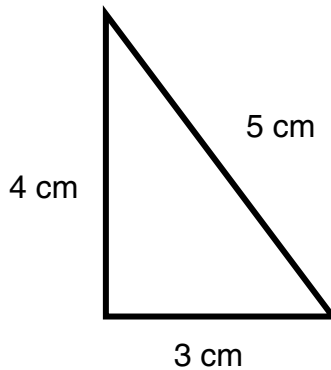
1.



Add  
all  
sides

Multiply any  
one side  
by the  
number of  
sides

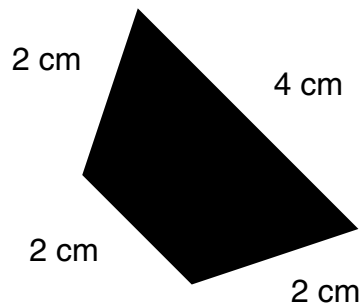
2.



Add  
all  
sides

Multiply any  
one side  
by the  
number of  
sides

3.

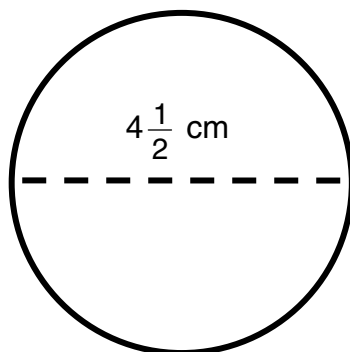


Add  
all  
sides

Multiply any  
one side  
by the  
number of  
sides

NAME: \_\_\_\_\_

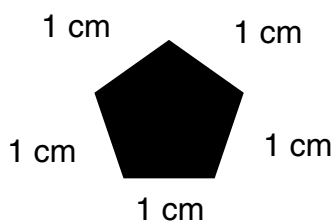
4.



Add  
all  
sides

Multiply any  
one side  
by the  
number of  
sides

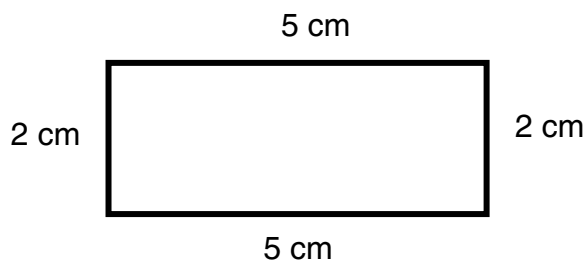
5.



Add  
all  
sides

Multiply any  
one side  
by the  
number of  
sides

6.



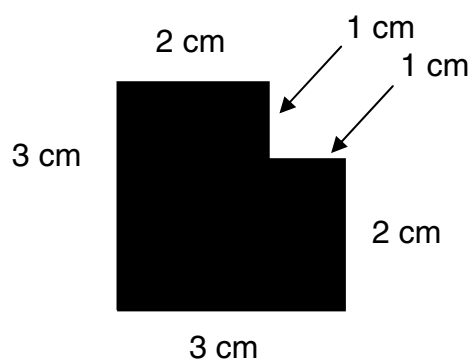
Add  
all  
sides

Multiply any  
one side  
by the  
number of  
sides



NAME: \_\_\_\_\_

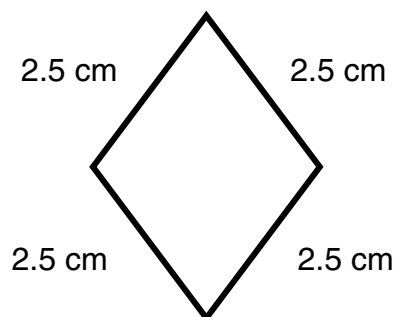
7.



Add  
all  
sides

Multiply any  
one side  
by the  
number of  
sides

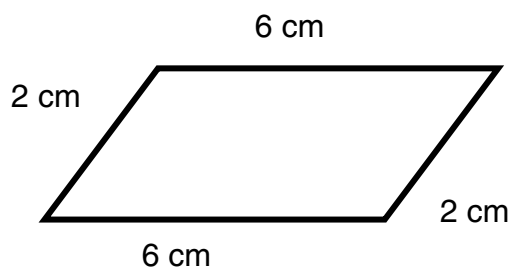
8.



Add  
all  
sides

Multiply any  
one side  
by the  
number of  
sides

9.



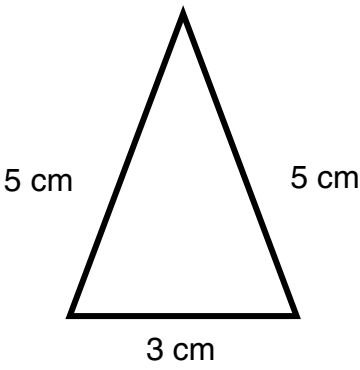
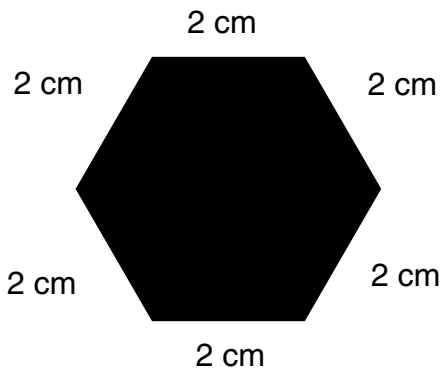
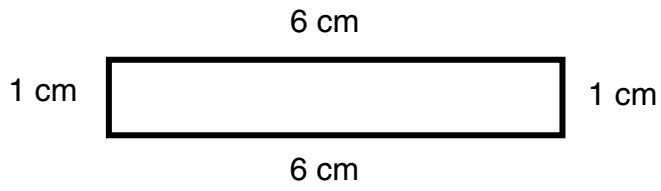
Add  
all  
sides

Multiply any  
one side  
by the  
number of  
sides

NAME: \_\_\_\_\_

### Numerical Expressions for Perimeter

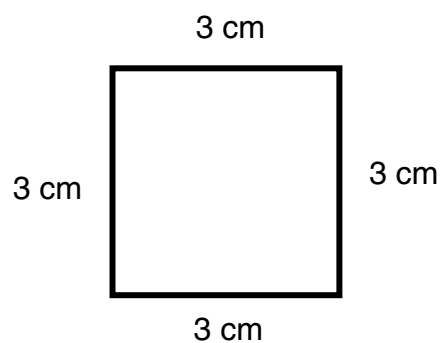
For each of the following figures, write a numerical expression such as  $7 + 5 + 2 + 2$  or  $3 \times 5$  to describe a correct way to calculate the perimeter of the figure.

- |    |                                                                                      | Numerical Expression<br>for Perimeter |
|----|--------------------------------------------------------------------------------------|---------------------------------------|
| 1. |     | _____                                 |
| 2. |    | _____                                 |
| 3. |  | _____                                 |

NAME: \_\_\_\_\_

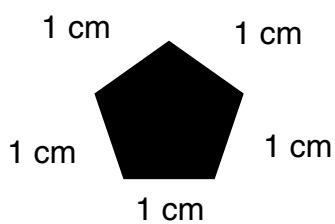
Numerical Expression  
for Perimeter

4.



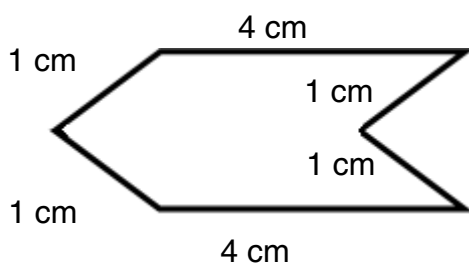
\_\_\_\_\_

5.



\_\_\_\_\_

6.

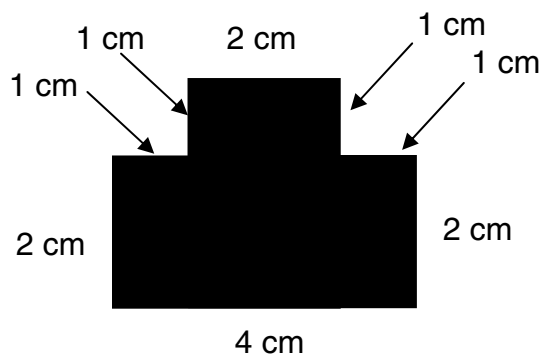


\_\_\_\_\_

NAME: \_\_\_\_\_

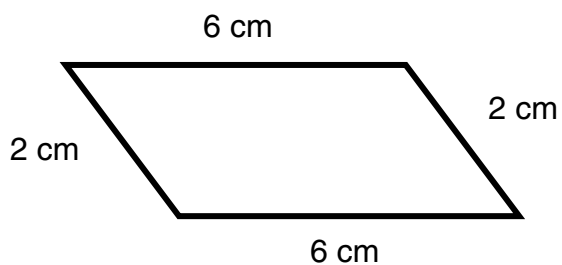
Numerical Expression  
for Perimeter

7.



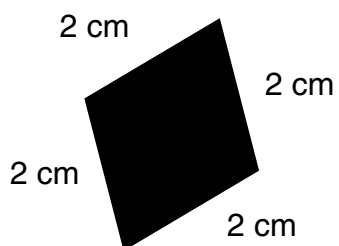
\_\_\_\_\_

8.



\_\_\_\_\_

9.



\_\_\_\_\_

Draw a figure and write a numerical expression  
for its perimeter.

10.

\_\_\_\_\_

**Adding with 100, 1,000, and 10,000****Worksheet 1**

Name \_\_\_\_\_

Write the answer to each problem in the blank.

1.)  $89,863 + 1,000 =$  \_\_\_\_\_

2.)  $8,138 + 1,000 =$  \_\_\_\_\_

3.)  $51,556 + 10,000 =$  \_\_\_\_\_

4.)  $100 + 7,388 =$  \_\_\_\_\_

5.)  $100 + 3,970 =$  \_\_\_\_\_

6.)  $27,211 + 100 =$  \_\_\_\_\_

7.)  $3,911 + 100 =$  \_\_\_\_\_

8.)  $1,000 + 7,064 =$  \_\_\_\_\_

9.)  $70,352 + 10,000 =$  \_\_\_\_\_

10.)  $1,000 + 29,364 =$  \_\_\_\_\_

11.)  $1,000 + 4,096 =$  \_\_\_\_\_

12.)  $8,308 + 100 =$  \_\_\_\_\_

13.)  $4,598 + 10,000 =$  \_\_\_\_\_

14.)  $6,796 + 100 =$  \_\_\_\_\_

15.)  $10,000 + 11,602 =$  \_\_\_\_\_

16.)  $3,728 + 10,000 =$  \_\_\_\_\_

17.)  $4,934 + 100 =$  \_\_\_\_\_

18.)  $1,000 + 6,085 =$  \_\_\_\_\_

19.)  $8,869 + 100 =$  \_\_\_\_\_

20.)  $4,265 + 100 =$  \_\_\_\_\_

21.)  $10,000 + 29,462 =$  \_\_\_\_\_

22.)  $71,776 + 10,000 =$  \_\_\_\_\_

23.)  $1,000 + 6,410 =$  \_\_\_\_\_

24.)  $1,000 + 89,480 =$  \_\_\_\_\_

25.)  $2,935 + 100 =$  \_\_\_\_\_

26.)  $6,071 + 100 =$  \_\_\_\_\_

27.)  $85,389 + 10,000 =$  \_\_\_\_\_

28.)  $81,720 + 1,000 =$  \_\_\_\_\_

29.)  $100 + 9,234 =$  \_\_\_\_\_

30.)  $27,751 + 100 =$  \_\_\_\_\_

## Time Conversions #1

### Relationships among units of time

- A) 1 day = 24 hours
- B) 1 hour = 60 minutes
- C) 1 minute = 60 seconds

### Approximate Relationships among units of time

- A) 1 month is about 4 weeks
- B) 1 year is about 365 days

### Common Abbreviations for units of time

- A) Minute: min
- B) Hour: hr
- C) Second: sec

### Examples

1. Convert 3 hours and 10 minutes into minutes.

Use the conversion 1 hour = 60 minutes.

3 hours = 1 hr + 1 hr + 1 hr = 60 min + 60 min + 60 min = 180 minutes

3 hours and 10 minutes = 180 min + 10 min = 190 minutes

2. Convert 75 minutes into a combination of whole hours and minutes.

Use the conversion 1 hour = 60 minutes.

75 minutes = 60 min + 15 min = 1 hour + 15 minutes

We say: 1 hour and 15 minutes.

3. Jason works for 32 minutes. Then Jason works for another 4 hours and 42 minutes. What is the total time in minutes that Jason worked?

Use the conversion: 1 hour = 60 minutes.

4 hours = 1 hr + 1 hr + 1 hr + 1 hr = 60 min + 60 min + 60 min + 60 min = 240 minutes

32 minutes + 4 hours and 42 minutes = 32 min + 240 min + 42 min = 314 minutes

**Practice**

Mary did chores and recorded the length of time she spent on each project.

Chore	Time Spent
Washing Dog	23 minutes
Laundry	2 hours and 53 minutes
Dishes	7 minutes
Walking Dog	1 hr and 2 minutes

- How many minutes did Mary spend doing laundry?
- What is the total amount of time Mary spent doing laundry and dishes? Give the answer in minutes.
- What is the total amount of time Mary spent washing the dog and doing laundry? Give the answer in minutes.
- What was the total amount of time Mary spent doing her chores? Give the answer in minutes.
- Rewrite answer B as a combination of hours and minutes (for example “2 hours and 32 minutes”).
- Rewrite answer C as a combination of hours and minutes.
- Rewrite answer D as a combination of hours and minutes.
- Mary’s dog is 9 months old.
  - About how many weeks old is the dog?
  - About how many days old is Mary’s dog?

NAME : \_\_\_\_\_

### **Quiz**

1. Brendan's little sister is 2 years old. What is his little sister's age in days?
  
  
  
  
  
  
  
  
  
  
2. A movie is 90 minutes long. What is the length of the movie written as a combination of hours and minutes?
  
  
  
  
  
  
  
  
  
  
3. Dinner will be ready in 1 hour and 23 minutes. What is the time until dinner is ready? Give the answer in minutes.



## Time Conversions #2

### Relationships among units of time

- A) 1 week = 7 days
- B) 1 day = 24 hours
- C) 1 hour = 60 minutes
- D) 1 minute = 60 seconds

### Approximate Relationships among units of time

- A) 1 month is about 4 weeks
- B) 1 year is about 365 days

### Practice

1. Elizabeth is 3 months, 3 weeks, and 4 days old. What is the total number of days that she has been alive?
2. Brooklyn is 16 months old. What is Brooklyn's approximate age written as a combination of years and months?
3. Glen is 139 days old. What is Glen's approximate age written as a combination of months, weeks, and days?
4. The school year is 9 months.
  - a) How many days is 9 months?
  - b) How many weeks is 9 months?
5. What numbers must be multiplied to determine how many seconds there are in 1 month?

6. Sam's total travel time from city A to city B was 4 days, 4 hours, and 32 minutes.

- a) What was Sam's total travel time in minutes?
- b) Sam left city A at 5:30 pm. What time was it in city A when Sam arrived in city B?

7. Patrick visited his grandmother. He left his house at 8:30 p.m. on Tuesday and returned home Thursday of the following week at 2:00 a.m.

- a) How many full, 24-hour days was Patrick away from home?
- b) What was the total number of whole hours Patrick was away from home?
- c) How many total minutes was Patrick away from home?

8. Sarah is 9 years old.

- a) Explain how you would determine Sarah's age in minutes.
- b) How many minutes old is Sarah?

## Ordering Fractions with Models

### Explanation: Unit Fractions

- A) Every fraction has a numerator (on top) and a denominator (on bottom).  
B) The denominator shows how many sections are in the whole.  
Example: In  $\frac{3}{7}$ , the 7 represents a whole that has been divided into 7 sections.  
C) The numerator shows how many of those sections the fraction represents.  
Example: In  $\frac{3}{7}$ , the 3 represents 3 of those 7 sections.  
D) A unit fraction is a fraction with a numerator of 1.  
Examples include  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$ , ...

### Explanation: Ordering Unit Fractions with Unlike Denominators

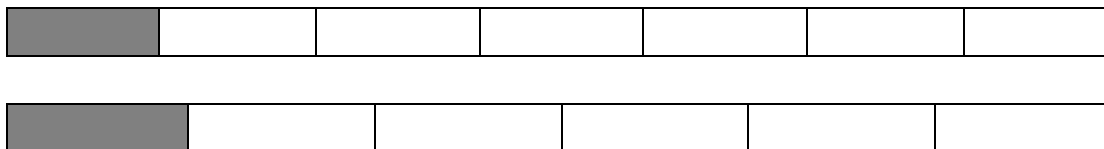
- A) To order unit fractions with unlike denominators, make a model of each fraction.  
Divide a shape, like a rectangle, into equal sections according to the denominator.  
Then shade sections according to the numerator.  
Example: Here is a model of  $\frac{1}{7}$ :



- B) When a shape is divided into a greater number of equal sections, each section becomes smaller.

Another way to say this is:  
As the denominator of a unit fraction becomes larger,  
the amount the unit fraction represents gets smaller.

- C) Example:  $\frac{1}{7}$  of a rectangle is less than  $\frac{1}{6}$  of the same rectangle, as shown below.



**Explanation: Ordering Fractions with Like Denominators**

A) Because the denominators are the same, fractions with like denominators can be ordered according to the numerator.

B) Example:  $\frac{3}{8}$  of a rectangle is greater than  $\frac{2}{8}$  of the rectangle  
because  $\frac{3}{8}$  represents one more section of equal size than  $\frac{2}{8}$  does.

The rectangles below are shaded to represent the unit fractions from  $\frac{1}{2}$  through  $\frac{1}{12}$ .

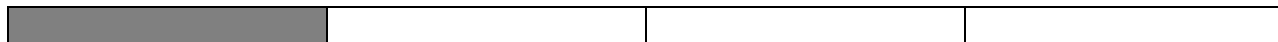
$$\frac{1}{2}$$



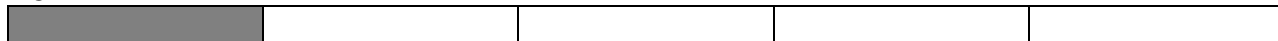
$$\frac{1}{3}$$



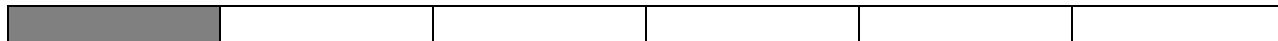
$$\frac{1}{4}$$



$$\frac{1}{5}$$



$$\frac{1}{6}$$



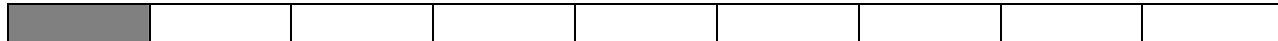
$$\frac{1}{7}$$



$$\frac{1}{8}$$



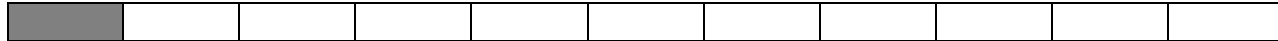
$$\frac{1}{9}$$



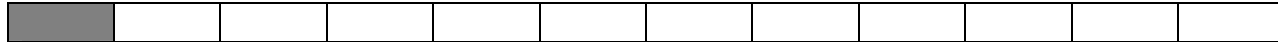
$$\frac{1}{10}$$



$$\frac{1}{11}$$



$$\frac{1}{12}$$



NAME: \_\_\_\_\_

**Examples** – Put the following lists of fractions in order from least to greatest.

1.  $\frac{1}{11}, \frac{1}{3}, \frac{1}{5}$        $\frac{1}{11}$        $\frac{1}{5}$        $\frac{1}{3}$

2.  $\frac{2}{7}, \frac{4}{7}, \frac{1}{7}$        $\frac{1}{7}$        $\frac{2}{7}$        $\frac{4}{7}$

**Practice** – Put the following lists of fractions in order from least to greatest.

1.  $\frac{3}{6}, \frac{2}{6}, \frac{5}{6}$       \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_

2.  $\frac{1}{4}, \frac{1}{3}, \frac{1}{10}$       \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_

3.  $\frac{5}{7}, \frac{6}{7}, \frac{1}{7}$       \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_

4.  $\frac{1}{7}, \frac{1}{10}, \frac{1}{5}$       \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_

5.  $\frac{1}{8}, \frac{1}{6}, \frac{1}{3}$       \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_

6.  $\frac{4}{8}, \frac{6}{8}, \frac{2}{8}$       \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_

7.  $\frac{1}{5}, \frac{1}{11}, \frac{1}{4}$       \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_

8.  $\frac{5}{10}, \frac{7}{10}, \frac{2}{10}$       \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_

9.  $\frac{7}{9}, \frac{5}{9}, \frac{8}{9}$       \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_

10.  $\frac{1}{4}, \frac{1}{9}, \frac{1}{6}$       \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_

NAME: \_\_\_\_\_

**Quiz** – Put the following lists of fractions in order from least to greatest.

1.  $\frac{8}{11}, \frac{3}{11}, \frac{10}{11}$       \_\_\_\_\_

2.  $\frac{1}{5}, \frac{1}{6}, \frac{1}{9}$       \_\_\_\_\_

3.  $\frac{1}{8}, \frac{1}{2}, \frac{1}{12}$       \_\_\_\_\_

4.  $\frac{5}{12}, \frac{11}{12}, \frac{3}{12}$       \_\_\_\_\_

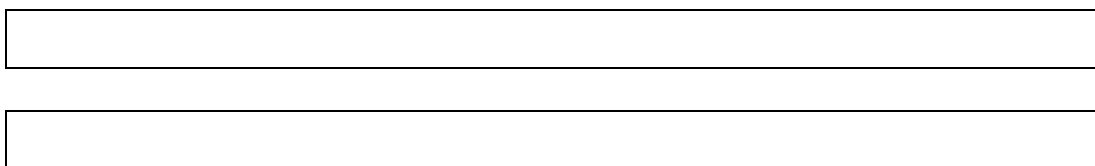
5.  $\frac{1}{5}, \frac{4}{5}, \frac{3}{5}$       \_\_\_\_\_

## Comparing Unit Fractions with Models

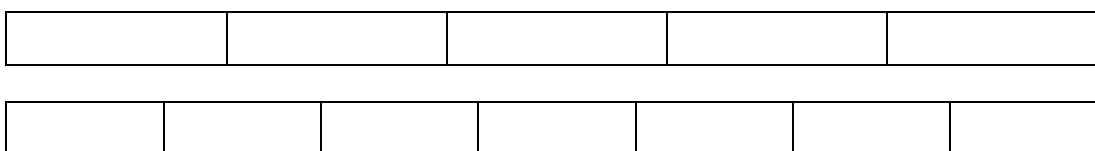
### Explanation

- A) Every fraction has a numerator (on top) and a denominator (on bottom).
- B) The denominator shows how many sections are in the whole.  
Example: In  $\frac{1}{7}$ , the 7 represents a whole that has been divided into 7 sections.
- C) The numerator shows how many of those sections the fraction represents.  
Example: In  $\frac{1}{7}$ , the 1 represents 1 of those 7 sections.
- D) A unit fraction is a fraction with a numerator of 1.  
Examples include  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$ , ...
- E) One way to compare unit fractions is to make a model of each fraction.  
Let's compare  $\frac{1}{5}$  to  $\frac{1}{7}$ .

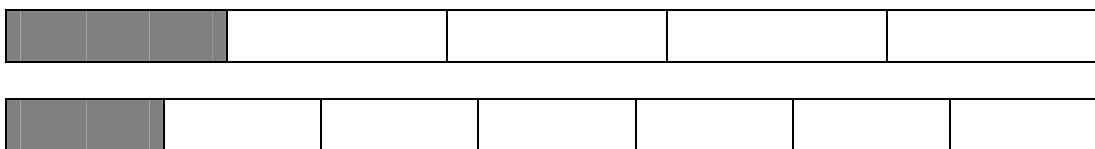
- ✓ Start with two same-sized shapes such as circles or rectangles.



- ✓ Divide one shape into 5 equal sections and the other into 7 equal sections.



- ✓ Shade one section in each shape so it's easy to compare sizes.

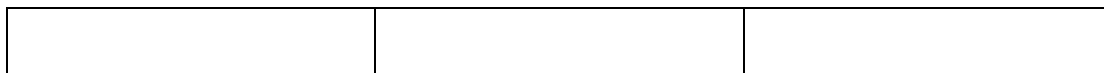


- ✓ Compare the sizes of the shaded parts.

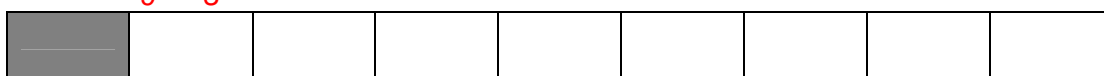
- F) Write a number sentence using < (less than) or > (greater than):  $\frac{1}{5} > \frac{1}{7}$

**Examples**

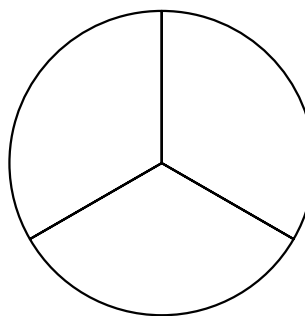
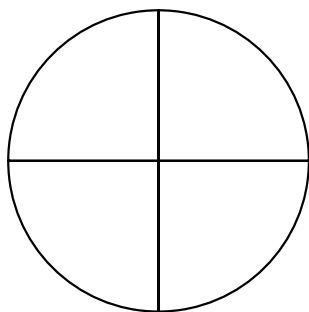
1. Shade the shapes below. Write a number sentence to compare  $\frac{1}{9}$  \_\_\_\_\_  $\frac{1}{3}$ .



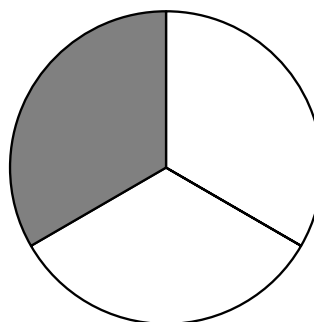
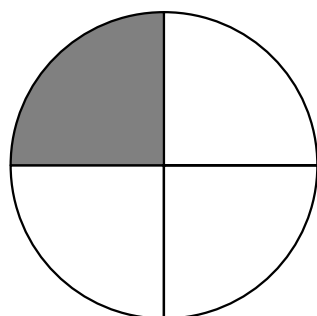
ANSWER:  $\frac{1}{9} < \frac{1}{3}$



2. Shade the shapes below. Write a number sentence to compare  $\frac{1}{4}$  \_\_\_\_\_  $\frac{1}{3}$ .



ANSWER:  $\frac{1}{4} < \frac{1}{3}$





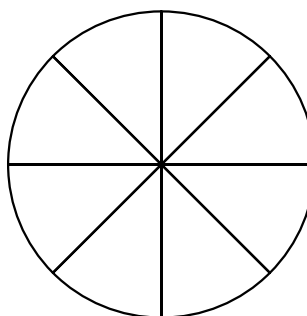
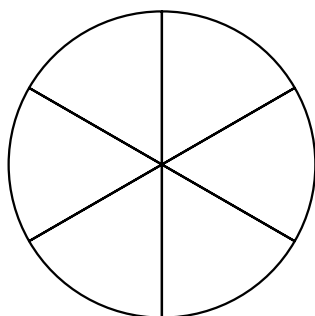
NAME: \_\_\_\_\_

**Practice** – Section and shade the shapes, then complete each number sentence.

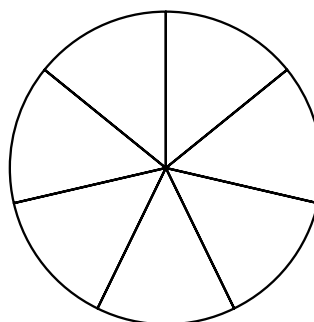
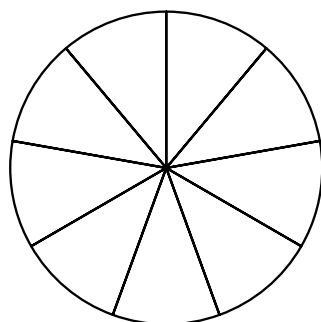
1. Show how to compare  $\frac{1}{4}$  —  $\frac{1}{3}$ .

2. Show how to compare  $\frac{1}{5}$  —  $\frac{1}{8}$ .

3. Show how to compare  $\frac{1}{6}$  —  $\frac{1}{8}$ .



4. Show how to compare  $\frac{1}{9}$  —  $\frac{1}{7}$ .



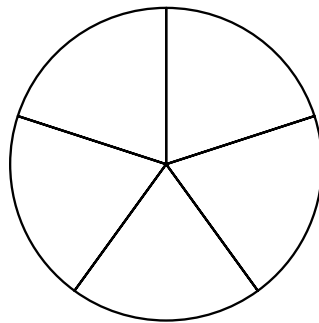
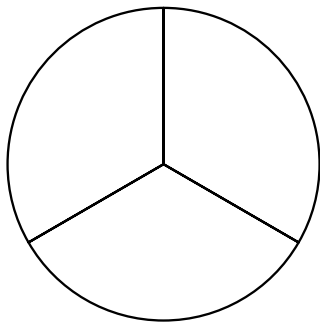
NAME: \_\_\_\_\_

**Quiz** – Section and shade the shapes, then complete each number sentence.

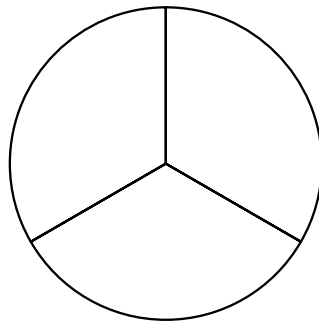
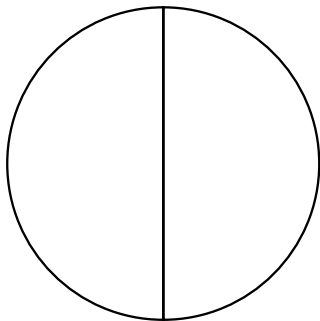
1. Show how to compare  $\frac{1}{3}$  \_\_\_\_\_  $\frac{1}{8}$ .

2. Show how to compare  $\frac{1}{10}$  \_\_\_\_\_  $\frac{1}{6}$ .

3. Show how to compare  $\frac{1}{3}$  \_\_\_\_\_  $\frac{1}{5}$ .



4. Show how to compare  $\frac{1}{2}$  \_\_\_\_\_  $\frac{1}{3}$ .



## Measuring the Distance around Objects – True False

### Explanation

- A) Tools can be used to measure various attributes, such as temperature, time, weight, or distance.
- B) The distance around an object is called the perimeter.

**Examples** – Read each statement about measuring the distance around objects. Put a box around the correct answer, “True” or “False.” Explain your answer.

1. A ruler is a good tool for measuring the distance around a ball.

TRUE

**FALSE**

A ruler does not bend. String, ribbon, or plastic measuring tape are flexible enough to bend around the ball.

---

2. One way to measure the distance around a rectangle is measure the length, measure the width, then find the sum of two lengths and two widths.

**TRUE**

FALSE

A rectangle has a total of four sides: two lengths and two widths. Adding the measures of two lengths and two widths is the same as measuring the total distance around all four sides.

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NAME: \_\_\_\_\_

**Practice** – Read each statement about measuring the distance around objects. Put a box around the correct answer, “True” or “False.” Explain your answer.

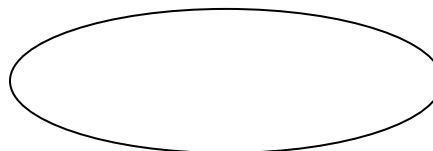
1. A plastic measuring tape is a good tool for measuring the distance around the front cover of a textbook

TRUE                  FALSE

---

2. This is the outline of an oval sticker.  
To measure its perimeter, measure the edge-to-edge distance at its widest.

TRUE                  FALSE



3. A magnifying glass is a good tool for measuring the distance around a small triangle.

TRUE                  FALSE

---

4. The perimeter of the base of a couch can be estimated by counting the number of identical new pencils that can be placed end-to-end on the floor along each side, then multiplying the number of pencils by the length of each pencil.

TRUE                  FALSE

---

5. A thermometer is a good tool for measuring the distance around a container of frozen yogurt.

TRUE                  FALSE

---

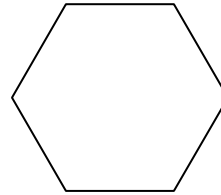
NAME: \_\_\_\_\_

**Quiz** – Read each statement about measuring the distance around objects. Put a box around the correct answer, “True” or “False.” Explain your answer.

1. One way to measure the distance around a rectangular window is to measure one side of the window and multiply by 4.  
TRUE FALSE
- 

2. A 12-inch ruler is a better tool than a plastic measuring tape for measuring the perimeter of one side of a refrigerator because the ruler will not bend.  
TRUE FALSE
- 

3. This hexagon has equal sides.  
One way to measure its perimeter is to measure one side and multiply by 6.  
TRUE FALSE



## Completing Number Sentences

### Explanation

- A) A number sentence is an equation or inequality (you will learn about inequalities later) that includes numbers, one or more operation symbols (+, −, ×, ÷), and an unknown quantity.
- B) A variable is a letter or symbol that represents an unknown quantity.
- C) We can write number sentences to represent a situation and use them to solve for an unknown quantity.

**Example** – Insert a number and/or operation (+, −, ×, ÷) that makes the number sentence true:

$$7 \_ 2 = 72 \_ 8$$

We need to find either a single operation or two different operations that make the left side of the equation equal to the right side of the equation.

Step 1. Use a guess-and-check method to replace each \_\_\_ with an operation until you find operations that work.

A table may be helpful to list different values of each expression.

	Left Side	Right Side
	$7 \_ 2$	$72 \_ 8$
+	$7 + 2 = 9$	$72 + 8 = 80$
−	$7 - 2 = 5$	$72 - 8 = 64$
×	$7 \times 2 = 14$	$72 \times 8 = 576$
÷	$7 \div 2 = 3.5$	$72 \div 8 = 9$

Step 2. Find two expressions in the table that are equal.

$$7 + 2 = 9$$

$$72 \div 8 = 9$$

Step 3. Write the complete number sentence.

$$7 + 2 = 72 \div 8$$

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**Practice A** – Insert an operation (+, −, ×, ÷) that makes each number sentence true.

1.  $3\_5 = 15$

2.  $18\_6 = 3$

3.  $42 = 6\_7$

4.  $7 = 63\_9$

5.  $24\_6 = 3\_1$

6.  $2\_7 = 7\_7$

7.  $4\_9 = 6\_6$

8.  $8\_8 = 5\_5$

9.  $45\_5 = 10\_1$

10.  $7\_3 = 29\_8$

**Practice B** – Insert a number and/or operation (+, −, ×, ÷) that makes each number sentence true.

1.  $8 \times \_ = 57\_1$

2.  $2 + \_ = 49\_7$

3.  $4 \times \_ = 40 \div \_$

4.  $\_ \div 6 = 3\_2$

5.  $\_ \times \_ = \_ \div \_$

## Number Sentence Match

### Explanation

- A) A number sentence is an equation or inequality (you will learn about inequalities later) that includes numbers, one or more operation symbols (+, −, ×, ÷), and an unknown quantity.
- B) A variable is a letter or symbol that represents an unknown quantity.
- C) We can write number sentences to represent a situation and use them to solve for an unknown quantity.

### Examples

1. There are 5 candies and each candy costs 12 cents. How much does it cost to buy all 5 candies?

Sarah writes the number sentence  $5 \times 12 = C$  to represent the problem.

- a) What does the variable  $C$  represent?

The variable is used to represent the unknown quantity, the number the problem is asking us to find. What are we being asked to find? The cost of 5 candies.

$C$  = the cost of 5 candies

- b) What does the number 12 represent in the number sentence?

Reread the original word problem and underline the meaning of 12:

There are 5 candies and each candy costs 12 cents. How much does it cost to buy all 5 candies?

12 represents the cost in cents of each candy.

- c) What does the number 5 represent?

Reread the original word problem and underline the meaning of 5:

There are 5 candies and each candy costs 12 cents. How much does it cost to buy all 5 candies?

5 represents the number of candies.

- d) What does  $\times$  represent?

$\times$  is the multiplication operation and represents the relationship between the numbers in the number sentence. The operation multiply was chosen for the word problem because the cost of 5 candies is

$12 + 12 + 12 + 12 + 12$  or  $5 \times 12$ , based on the fact that each candy is 12 cents.



2. A teacher has 24 markers and wants to divide them evenly among 6 students. How many markers does each student get?

Mathew uses the number sentence  $24 \div 6 = \square$  to represent the problem.

- a) What does  $\square$  represent?

The box is used to represent the unknown quantity, the number the problem is asking us to find. What are we being asked to find? The number of markers each student receives.

$\square$  = the number of markers each student receives.

- b) What does the number 24 represent?

Reread the problem to determine the meaning of 24.

A teacher has 24 markers and wants to divide them evenly among 6 students. How many markers does each student get?

24 represents the total number of markers the teacher has.

- c) What does the number 6 represent?

Reread the problem to determine the meaning of 6.

A teacher has 24 markers and wants to divide them evenly among 6 students. How many markers does each student get?

6 represents the number of students who receive a marker.

**Practice** – Match each number sentence to a problem that could be solved using the number sentence.

1.  $8 \times 4 = R$

2.  $32 \div 2 = N$

3.  $12 \div \square = 4$

4.  $4 \times 3 = \square$

5.  $9 \times \square = 27$

6.  $3 = F \div 9$

7.  $5 \times Z = 15$

8.  $15 \div 3 = C$

9.  $Y \times 8 = 56$

10.  $16 \div 2 = \square$

- a. Alice earns \$12 dollars by selling 4 boxes of cookies. How much did each box of cookies cost?
- b. There are 16 customers waiting in line and 2 clerks at cash registers. Each clerk helps the same number of customers. How many customers does each clerk help?
- c. There are 8 shelves in a bookcase and 4 books on each shelf. How many books are in the bookcase?
- d. Mary earns 27 points after answering 9 questions correctly. If each question is worth the same number of points, how many points was each question worth?
- e. Tom places 4 tennis balls in each box. There are 3 boxes. What is the total number of tennis balls that Tom places in all the boxes?
- f. Tony buys 8 equally priced pizzas and spends \$56 dollars. How much does each pizza cost?
- g. Mason sells dinner meals for \$5 each and earns \$15. How many dinners did Mason sell?
- h. Emilia creates 3 equal groups of 15 counting cubes. How many counting cubes are in each group?
- i. A coach divides the team members into 3 groups with 9 players in each group. How many players are on the team?
- j. There are 32 students in a class. The class is split into 2 even teams. How many students are on each team?

**Quiz**

1. Book covers are on sale for \$2. Paula buys 9 covers. How much does Paula pay?

Paula uses this number sentence to solve the problem:  $2 \times 9 = B$

What does the variable represent?

- a) The amount Paula pays
  - b) The cost of each book cover
  - c) The number of book covers Paula buys
  - d) The number of books Paula needs to cover
2. Sean passes out an equal number of marbles to each of the 30 students in the class. If each student is given 5 marbles, how many markers did Sean pass out?

Sean begins to write a number sentence to solve the problem:  $30 \_ 5 = M$

Which operation goes in \_\_\_?

- a) +
  - b) -
  - c)  $\times$
  - d)  $\div$
3. Which problem could be represented by the number sentence:  $2 \times 3 = \square$
- a) What number times 2 is 3?
  - b) What number multiplied by 3 is 2?
  - c) What number is the quotient of 2 and 3?
  - d) What number is the product of 2 and 3?
4. Which problem could be used to represent the number sentence  $81 \div 9 = \square$
- a) Rob begins with 81 cents and then spends 9 cents. How many cents does Rob have now?
  - b) Lilly spends 81 dollars on 9 copies of the same book. What is the cost of each book?
  - c) Jo earns 81 points on a test and then receives 9 bonus points. What is the total number of points that Jo earns?

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- d) Marge makes 81 cookies for each of her 9 friends' birthday parties. How many cookies does Marge make altogether?
5. Four friends go out to dinner and split the \$24 bill evenly. How much does each friend contribute to the bill?

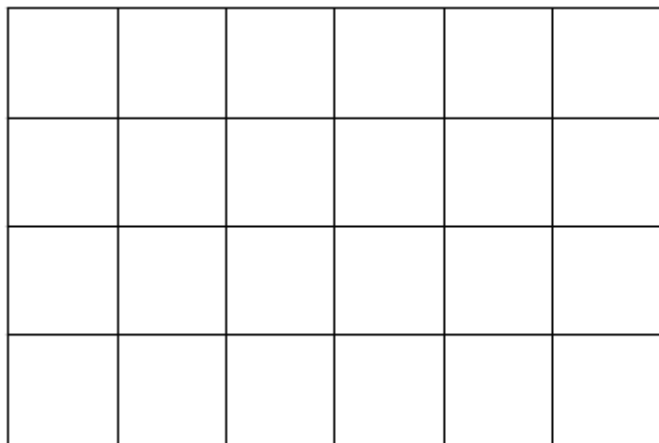
The problem can be solved using the number sentence:  $24 \div 4 = C$

What does the variable represent?

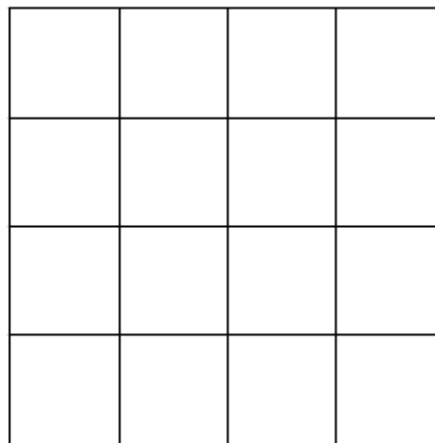
- a) The cost of the bill
- b) The cost of each meal
- c) The amount each friend paid
- d) The number of friends sharing the bill

## Comparing Fractional Parts of Different Wholes

The following diagram shows two wholes divided into sections of equal size.



**Whole A**



**Whole B**

**Part 1.** Use the above diagram to help you fill in the blank to complete each comparison of the fractional parts of whole A and whole B. You may use a symbol such as  $<$ ,  $>$ , or  $=$ , or a number, or a phrase such as “is less than”, “is greater than”, or “is equal to”.

- $\frac{1}{4}$  of whole A \_\_\_\_\_  $\frac{1}{4}$  of whole B.
- $\frac{1}{4}$  of whole A \_\_\_\_\_  $\frac{1}{2}$  of whole B.
- \_\_\_\_\_ of whole A =  $\frac{1}{4}$  of whole B.
- $\frac{1}{2}$  of whole A \_\_\_\_\_  $\frac{3}{4}$  of whole B.
- $\frac{1}{8}$  of whole A = \_\_\_\_\_ whole B.
- 1 whole B = \_\_\_\_\_ of whole A.
- $\frac{1}{8}$  of whole B \_\_\_\_\_  $\frac{1}{6}$  of whole A.
- $\frac{1}{16}$  of whole B = \_\_\_\_\_ of whole A.
- Whole A = whole B if you remove \_\_\_\_\_ of whole A from whole A.
- Whole A = whole B if you add \_\_\_\_\_ of whole B to whole B.

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**Part 2.** Critical thinking. Using grid paper, draw two wholes for each phrase.

1.  $\frac{3}{4}$  of whole C is larger than  $\frac{3}{4}$  of whole D.

2.  $\frac{1}{8}$  of whole E is greater than  $\frac{1}{4}$  of whole F.

3.  $\frac{1}{4}$  of whole G =  $\frac{1}{8}$  of whole H.

4.  $\frac{1}{2}$  of whole J =  $\frac{1}{3}$  of whole K.

5.  $\frac{3}{2}$  of whole L = 1 whole M.

## Creating Situations to Represent Number Sentences

### Examples

1. Create a situation involving ice cubes to represent the number sentence  $4 \times 3 = 12$ .

Multiplication represents the addition of equal-sized groups. The 3 could represent 3 groups and the 4 could represent the number of things in each group or the size of each group. We group ice cubes in glasses. We could have 3 glasses with 4 ice cubes in each glass.

A situation that could represent the number sentence  $4 \times 3 = 12$  is: Sara makes 3 glasses of lemonade and places 4 ice cubes in each glass. She uses 12 ice cubes in all.

2. Create a situation involving markers to represent the number sentence  $24 \div 3 = 8$ .

Division represents repeated subtraction. When we begin with the number 24, we can repeatedly subtract the number 3 eight times before we reach a result of zero. We could begin with 24 markers and give 3 away at a time.

A situation that could represent  $24 \div 3 = 8$  is: A teacher has 24 markers to give away. The teacher wants to give 3 markers to each student. The teacher can give markers, 3 at a time, to a total of 8 students.

3. Create a situation involving pencils to represent the number sentence  $7 \times \square = 21$ , where  $\square$  represents the value that students are asked to find.

Since multiplication represents the addition of equal-sized groups, the number 7 could represent the number of things placed in each group. The  $\square$  represents the number of groups we ask the students to find. The 21 represents the number of things we have in all.

A situation that could represent  $7 \times \square = 21$  is: Mr. Anderson has 21 pencils in all. He makes groups of 7 pencils each. How many total groups of pencils can Mr. Anderson make?

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**Practice** – Use each context and number sentence to create a situation to represent each number sentence.

1. Number Sentence:  $2 \times 12 = 24$       Context: People on a bus
2. Number Sentence:  $32 \div 8 = 4$       Context: Chairs in a classroom
3. Number Sentence:  $9 \times 12 = 108$       Context: Beads on necklaces
4. Number Sentence:  $6 \times \square = 48$       Context: Pennies in jars
5. Number Sentence:  $52 \div \square = 13$       Context: Cards dealt to players
6. Number Sentence:  $9 \times 7 = \square$       Context: Grapes on snack plates
7. Number Sentence:  $35 \div 5 = \square$       Context: Fish in fish bowls
8. Number Sentence:  $\square \times 10 = 90$       Context: Cupcakes given to friends
9. Number Sentence:  $56 \div \square = 8$       Context: Marbles in bags
10. Number Sentence:  $3 \times 6 = 18$       Context: Pieces of yarn used to make bracelets



**Quiz** – Circle the letter that best answers each question.

1. Which situation could be solved using the number sentence:  $11 \times 4 = 44$  ?

- a) There are 4 more boys than 11 girls in a class. There are a total of 44 students.
- b) There are 4 fewer apples than oranges. There are 11 oranges and 44 fruit in all.
- c) There are 4 pieces of fruit placed on each plate. There are 11 plates and 44 fruits in all.
- d) There are 11 pieces of fruit placed on each plate. There are 44 plates and 4 pieces of fruit in all.

2. Which situation could be solved using the number sentence:  $8 \div 2 = 4$  ?

- a) 8 candies are split into 2 equal groups. Each group has 4 candies.
- b) 8 candies are placed on each plate. There are 4 plates and each plate has 2 candies.
- c) There are 2 yellow markers and 4 blue markers. There are 8 markers in all.
- d) There are 4 more yellow markers than blue markers. There are 8 markers in all.

3. Which situation could be solved using the number sentence:  $6 \times \square = 42$  ?

- a) There are 42 pens in all. There are 6 more black pens than red pens.
- b) There are 42 pens in all. There are 6 fewer black pens than red pens.
- c) There are 42 students and 6 tennis balls. How many more students than tennis balls are there?
- d) There are 6 tennis balls in each tennis ball container. If there are 42 tennis balls in all, how many containers are needed?

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4. Which situation could **not** be solved using the number sentence:  $50 \div \square = 10$  ?
- a) There are 50 prizes handed out for 10 events. Each event gives away an equal number of prizes. How many prizes are handed out at each event?
  - b) There are 10 groups with 50 people in each group. How many people are there in all?
  - c) There are 50 students split into equal-sized groups. If there are 10 groups of students, how many students are in each group?
  - d) There are 10 keys placed on each key ring. How many key rings are there if there is a total of 50 keys?
5. Which situation could **not** be solved using the number sentence:  $6 \times 4 = \square$  ?
- a) What is the product of 6 and 4?
  - b) What is the quotient of 6 and 4?
  - c) What is 6 multiplied by 4?
  - d) What is 6 times 4?

**Number Sentence Match #2****Explanation**

- A) A number sentence is an equation or inequality (you will learn about inequalities later) that includes numbers, one or more operation symbols (+, −, ×, ÷), and an unknown quantity.
- B) A variable is a letter or symbol that represents an unknown quantity.
- C) We can write number sentences to represent a situation and use them to solve for an unknown quantity.

**Examples**

1. A baker has 124 cookies to put into bags. The baker puts an equal number of cookies into each of 6 bags. How many cookies are in each bag?

Alisa uses the number sentence  $6 \times c = 124$  to solve the problem.

- a. What does the  $c$  represent?

The letter  $c$  is the unknown value in the problem. The problem asks: How many cookies are in each bag? Therefore,  $c$  = the number of cookies in each bag.

- b. What is a related number sentence that Alisa could have used to solve the problem?

Division and multiplication are inverse relationships of each other. Just as  $3 \times 4 = 12$  and  $12 \div 3 = 4$  are called fact families,  $6 \times c = 124$  and  $124 \div 6 = c$  are fact families.

So both the equations  $6 \times c = 124$  and  $124 \div 6 = c$  could be used for the same problem.

**Part 1.** Match each number sentence to a problem that could be solved using the number sentence. Not every lettered problem will be used as an answer.

1.  $640 = 4 \times Z$

2.  $12 \times 13 = Y$

3.  $143 \div 11 = F$

4.  $54 \times 11 = \square$

5.  $640 = 24 \times B$

6.  $Z = 2 \times (13 + 5)$

7.  $y = 640 \div 4$

8.  $12 = C \div 13$

9.  $Y \times 11 = 143$

10.  $54 = \square \div 11$

- a. On a farm, 4 workers pick 640 ears of corn. Each worker picks an equal amount of corn. How many ears of corn did each worker pick?
- b. There are 143 fourth graders in a cafeteria and 11 tables. An equal number of students sit at each table. How many students sit at each table?
- c. Lena made 54 necklaces. Each necklace is made using 11 beads. What is the total number of beads Lena used?
- d. Hank has 5 fewer toys than Mary. Sarah has twice as many toys as Mary. Hank has 13 toys. How many toys does Sarah have?
- e. Brady reads 24 pages of his book each day. The book has 640 pages in it. How many days will it take for Brady to finish his book?
- f. Tammy has 4 more apples than oranges to sell. Tammy has 640 oranges to sell. How many apples does Tammy have?
- g. There are 13 students who play the flute and 12 students who play the violin. How many more students play the flute than the violin?
- h. Alex is asked to find the product of 143 and 11. What is the product of 143 and 11?
- i. Tanya shoots 54 baskets each day at practice. What is the total number of baskets she shoots in 13 practices?
- j. In a zoo, there are 13 birds for every monkey. There are 12 monkeys at the zoo. What is the total number of birds and monkeys at the zoo?

NAME: \_\_\_\_\_

**Part 2.** Create a word problem to represent each number sentence.

1.  $2 \times p = 24$

2.  $189 = 9 \times z$

3.  $63 \div 9 = y$

4.  $180 \div Q = 12$

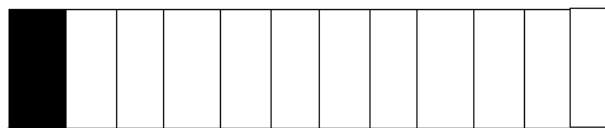
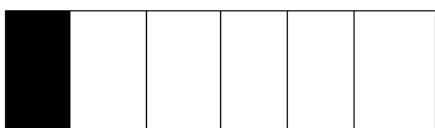
5.  $3 \times 680 = B$

## Errors in Comparing Fractions

Several students in Ms. Angell's class made errors when making models to compare fractions, and it is your job to help them. Each numbered problem below has been answered incorrectly by two students using models that are shaded black to represent fractions. Their solutions are listed in A and B. Examine the solutions and describe the errors. Then, in C, give your own correct solution.

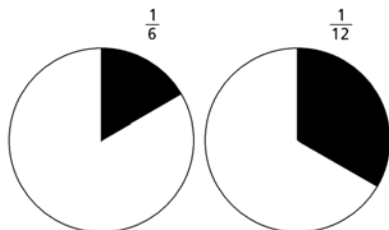
1. Which fraction is larger,  $\frac{1}{12}$  or  $\frac{1}{6}$ ?

- A. Tanya drew the figures below to show  $\frac{1}{6}$  is larger than  $\frac{1}{12}$ .



What is Tanya's error?

- B. Martin drew the figures below to explain that  $\frac{1}{12}$  is larger than  $\frac{1}{6}$ .

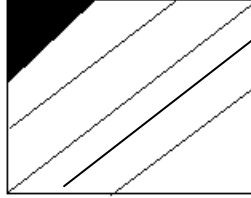
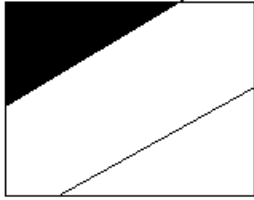


What is Martin's error?

- C. Create your own correct answer to the question "Which fraction is larger,  $\frac{1}{12}$  or  $\frac{1}{6}$ ?" with drawings and explanation.

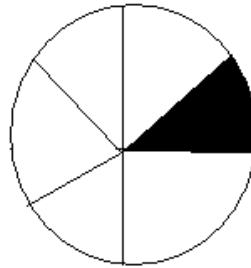
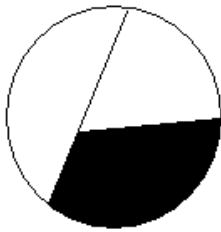
2. Which fraction is larger,  $\frac{1}{3}$  or  $\frac{1}{6}$ ?

A. Bobby drew the figures below to explain that  $\frac{1}{3}$  is larger than  $\frac{1}{6}$ .



What is Bobby's error?

B. Leslie drew the figures below to explain  $\frac{1}{3}$  is larger than  $\frac{1}{6}$ .



What is Leslie's error?

C. Create your own correct answer to the question "Which fraction is larger,  $\frac{1}{3}$  or  $\frac{1}{6}$ ?" with drawings and explanation.



Name \_\_\_\_\_ Date \_\_\_\_\_

**Mathematics Problem Solving**  
**Volume 6, Number 14, January 12, 2001**  
[www.rhlschool.com](http://www.rhlschool.com)

## Video Time

1. Charlene wants to show her favorite video movie. It lasts for 130 minutes. Sam wants to watch a video that lasts exactly two hours. Charlene's video is \_\_\_\_\_ minutes longer than Sam's.
2. We've decided that we only have enough time to watch half of Sam's video. That will take \_\_\_\_\_ minutes.
3. Kelly showed four videos at her slumber party. They ran for 105 minutes, 180 minutes, 120 minutes, and 95 minutes. What was the average length of each video?
4. The videos at Kelly's party ran \_\_\_\_\_ hours and 20 minutes altogether.

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Name \_\_\_\_\_ Date \_\_\_\_\_

Mathematics Problem Solving  
Volume 4, Number 24, March 15, 1999  
www.rhlschool.com

### What Would You Do?

*What would, or more precisely, what should you do to solve the following problems?*

**1. Pablo ran in an eleven mile race. A mile equals 5,280 feet. How many feet did Pablo run in his race?**

- a. Divide 5,280 by 11.
- b. Multiply 11 times 5,280.
- c. Add 11 plus 5,280.
- d. Subtract 11 from 5,280.

**2. Kristy has a jar that contains 43,065 gumballs. She wants to put all the gumballs into 87 small jars. She wants to put exactly the same number of gumballs into each jar. How many gumballs will she put into each jar?**

- a. Subtract 87 from 43,065.
- b. Divide 43,065 by 87.
- c. Chew all the gumballs.
- d. Multiply 87 times 43,065.

**3. Andrea weighs 145 pounds. She is pleased because just a month ago she weighed 153 pounds. How much weight ( in pounds) did she lose since last month?**

- a. Subtract 145 from 153.
- b. Subtract the amount she lost from 153.
- c. Add 145 plus 153.
- d. Divide 153 by 145.

**4. These are Brian's pets: 16 cats, 24 dogs, and 2 parrots. How many pets does Brian have?**

- a. Add 16 and 24; then divide that sum by 2.
- b. Add 16 plus 24 plus 2.
- c. Multiply 16 times the sum of 24 and 2.
- d. Subtract 16 from 24 and then subtract 2 more.

**5. Johnny is very proud of his new Website. It had 862 visitors in the first week it was online. It had 1,991 visitors in the second week, and 2,406 visitors in the third week. In the first three weeks, Johnny's site had an average of how many visitors per day?**

- a. Add 862 plus 1, 991 plus 2,406 and divide it by 3.
- b. Add 862 plus 1, 991 plus 2,406 and subtract 3.
- c. Add 862 plus 1, 991 plus 2,406 plus 3.
- d. Add 862 plus 1, 991 plus 2,406 and divide it by the product of 3 and 7.

1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_

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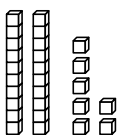
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Name \_\_\_\_\_

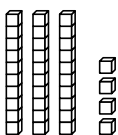
# Representing Numbers to 50

Write the number in different ways.

1. 

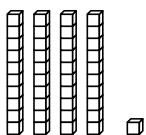
Tens	Ones
2	7

27

2. 

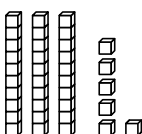
Tens	Ones

\_\_\_\_\_

3. 

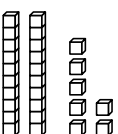
Tens	Ones

\_\_\_\_\_

4. 

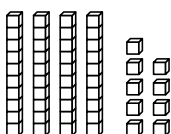
Tens	Ones
3	6

\_\_\_\_\_

5. 

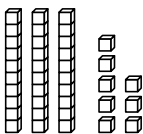
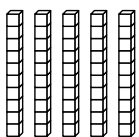
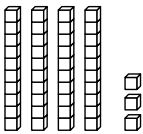
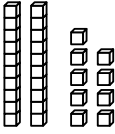
Tens	Ones

\_\_\_\_\_

6. 

Tens	Ones

\_\_\_\_\_

7. 	<table border="1"> <thead> <tr> <th>Tens</th> <th>Ones</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>8</td> </tr> </tbody> </table>	Tens	Ones	3	8	$\underline{30} + \underline{8} = \underline{\quad}$ thirty-eight
Tens	Ones					
3	8					
8. 	<table border="1"> <thead> <tr> <th>Tens</th> <th>Ones</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	Tens	Ones			$\underline{50} + \underline{0} = \underline{\quad}$ fifty
Tens	Ones					
9. 	<table border="1"> <thead> <tr> <th>Tens</th> <th>Ones</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	Tens	Ones			$\underline{40} + \underline{3} = \underline{\quad}$ forty-three
Tens	Ones					
10. 	<table border="1"> <thead> <tr> <th>Tens</th> <th>Ones</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	Tens	Ones			$\underline{20} + \underline{9} = \underline{\quad}$ twenty-nine
Tens	Ones					

Name \_\_\_\_\_

## Using $>$ , $<$ , and $=$

Write  $>$ ,  $<$ , or  $=$ .

Use tens and ones if you like.

1.

$$17 \bigcirc 19$$

2.

$$82 \bigcirc 82$$

3.

$$20 \bigcirc 10$$

4.

$$36 \bigcirc 33$$

5.

$$67 \bigcirc 76$$

6.

$$42 \bigcirc 37$$

7.

$$54 \bigcirc 45$$

8.

$$92 \bigcirc 99$$

9.

$$64 \bigcirc 64$$

10.

$$72 \bigcirc 81$$

11.

$$39 \bigcirc 53$$

12.

$$44 \bigcirc 51$$

Name \_\_\_\_\_

## Counting from Any Number

Skip count by threes.

- |                             |                             |
|-----------------------------|-----------------------------|
| 1. 3, 6, 9, _____, _____    | 2. 22, 25, 28, _____, _____ |
| 3. 57, 60, 63, _____, _____ | 4. 80, 83, 86, _____, _____ |
- 

Skip count by twos.

- |                             |                             |
|-----------------------------|-----------------------------|
| 5. 32, 34, 36, _____, _____ | 6. 14, 12, 10, _____, _____ |
| 7. 27, 25, 23, _____, _____ | 8. 70, 72, 74, _____, _____ |
- 

Skip count by fives.

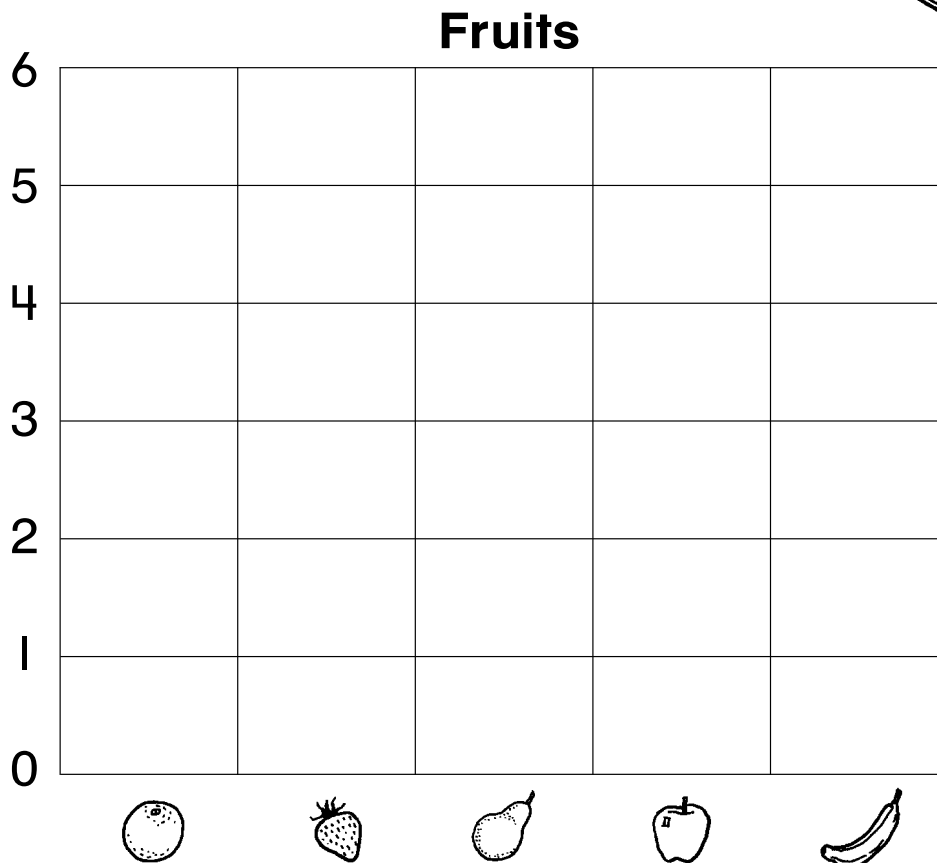
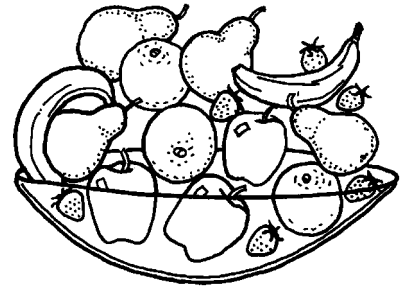
9. 45, 40, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_
10. 80, 75, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_
11. On Monday SueAnne had \$12.00.  
Every day she spent \$3.00 for lunch.  
How much did she have on Tuesday? \_\_\_\_\_  
Wednesday? \_\_\_\_\_ Thursday? \_\_\_\_\_











Name \_\_\_\_\_

## Problem-Solving Strategy

### Make a Graph

1. Use the picture at the right to make a graph. Color one box for each fruit.



2. How many more  are there than  ? \_\_\_\_\_ more
3. How many fewer  are there than  ? \_\_\_\_\_ fewer
4. Circle the two fruits of which there are the same number.  
 and        and        and 

Name \_\_\_\_\_

## Using Addition Strategies

Follow each rule.

1.

Double it and add 1.	
4	9
5	
6	
7	
8	
9	

2.

Count on 2.	
4	6
5	
6	
7	
8	
9	

3.

Double it.	
9	18
8	
7	
6	
5	
4	

4.

Add 6.	
6	12
5	
4	
7	
9	
8	

5.

Add 8.	
4	12
9	
5	
8	
6	
7	

6.

Add 9.	
9	18
3	
7	
4	
8	
5	

Name \_\_\_\_\_

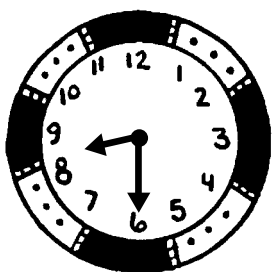
## Time to the Half-Hour

I

Write the time.

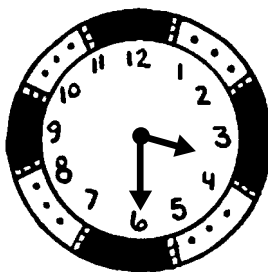
Color each clock that shows a time between 1 o'clock and 4 o'clock.

1.



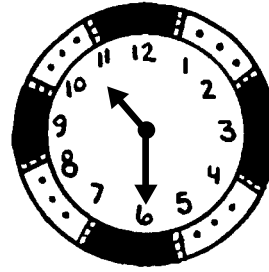
8:30

2.



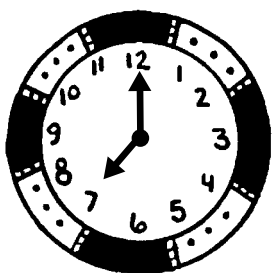
:

3.



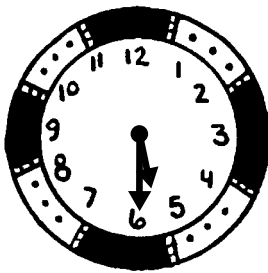
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4.



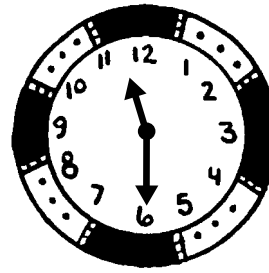
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5.



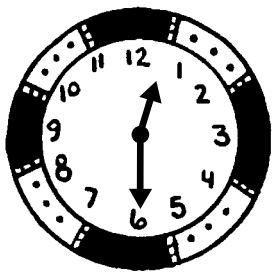
:

6.



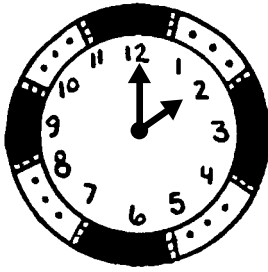
:

7.



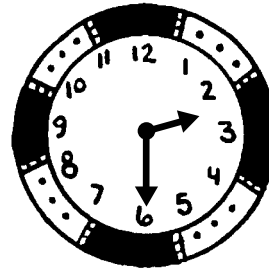
:

8.



:

9.





:



Name \_\_\_\_\_

## Tallying Results



What if you toss a penny 10 times?



Circle **yes**, **no**, or **maybe**.

1. Will it land on  3 times?      yes      no      maybe
2. Will it land on  10 times?      yes      no      maybe
3. Toss a penny 10 times. Tally. Write the totals.

	Tally	Total
		
		

What if you toss a penny 15 times?

4. Will it always land on  ?      yes      no      maybe
5. Will it land on  8 times?      yes      no      maybe
6. Toss a penny 15 times. Tally. Write the totals.

	Tally	Total
		
		

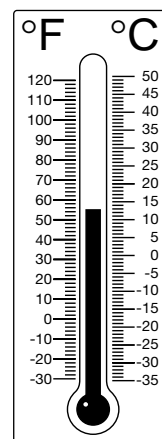
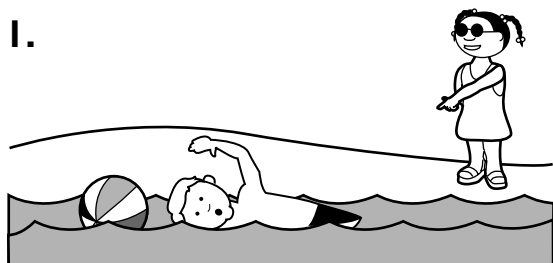


Name \_\_\_\_\_

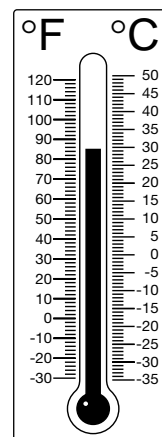
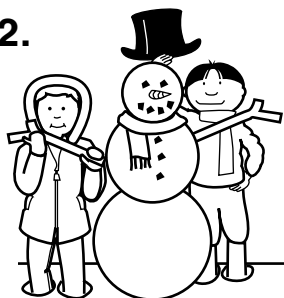
# Temperature

Draw a line from the thermometer to the correct picture.

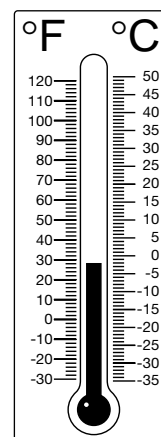
1.



2.



3.



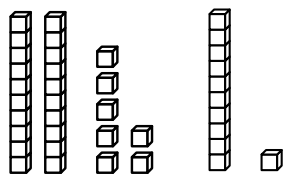
Name \_\_\_\_\_

## Adding Tens and Ones

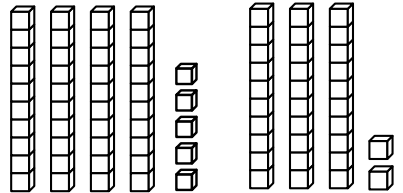
Add.

Use models if you like.

1. 
$$\begin{array}{r} 27 \\ + 11 \\ \hline 38 \end{array}$$



2. 
$$\begin{array}{r} 45 \\ + 32 \\ \hline \end{array}$$



---

3. 
$$\begin{array}{r} 26 \\ + 12 \\ \hline \end{array}$$
 
$$\begin{array}{r} 5 \\ + 13 \\ \hline \end{array}$$
 
$$\begin{array}{r} 20 \\ + 20 \\ \hline \end{array}$$
 
$$\begin{array}{r} 2 \\ + 16 \\ \hline \end{array}$$
 
$$\begin{array}{r} 7 \\ + 72 \\ \hline \end{array}$$

---

4. 
$$\begin{array}{r} 3 \\ + 44 \\ \hline \end{array}$$
 
$$\begin{array}{r} 59 \\ + 10 \\ \hline \end{array}$$
 
$$\begin{array}{r} 14 \\ + 70 \\ \hline \end{array}$$
 
$$\begin{array}{r} 21 \\ + 7 \\ \hline \end{array}$$
 
$$\begin{array}{r} 91 \\ + 7 \\ \hline \end{array}$$

---

5. 
$$\begin{array}{r} 41 \\ + 5 \\ \hline \end{array}$$
 
$$\begin{array}{r} 33 \\ + 46 \\ \hline \end{array}$$
 
$$\begin{array}{r} 87 \\ + 2 \\ \hline \end{array}$$
 
$$\begin{array}{r} 30 \\ + 30 \\ \hline \end{array}$$
 
$$\begin{array}{r} 63 \\ + 12 \\ \hline \end{array}$$

- 
6. Marci has 42 stamps in her stamp collection. Alicia gives her 7 more. How many stamps does she have now? \_\_\_\_\_ stamps

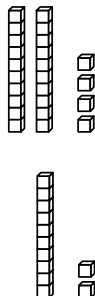
Name \_\_\_\_\_

# Adding Two-Digit Numbers

Add. Use models if you like.

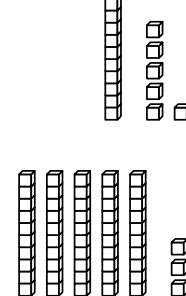
1.

Tens	Ones
2	4
+	1
3	2
3	6



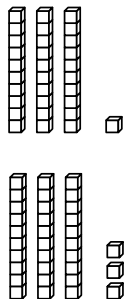
2.

Tens	Ones
1	6
+	5
	3



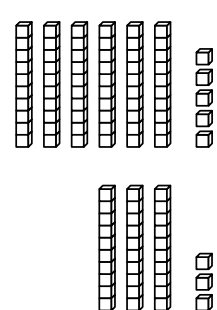
3.

Tens	Ones
3	1
+	3
	3



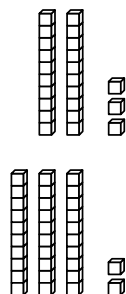
4.

Tens	Ones
6	5
+	3
	3



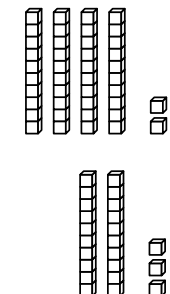
5.

Tens	Ones
2	3
+	3
	2



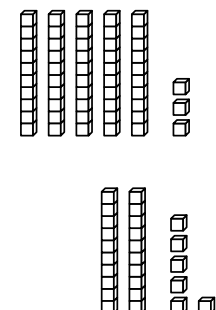
6.

Tens	Ones
4	2
+	2
	3



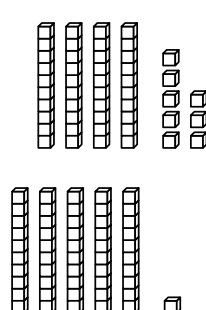
7.

Tens	Ones
5	3
+	2
	6



8.

Tens	Ones
4	8
+	5
	1



Name \_\_\_\_\_

## Rounding to the Nearest Ten



Write the ten that is closest  
to the number shown.

1.      63      60      12      \_\_\_\_\_      27      \_\_\_\_\_

---

2.      54      \_\_\_\_\_      31      \_\_\_\_\_      49      \_\_\_\_\_

---

3.      77      \_\_\_\_\_      18      \_\_\_\_\_      26      \_\_\_\_\_

---

4.      44      \_\_\_\_\_      57      \_\_\_\_\_      23      \_\_\_\_\_

---

5.      38      \_\_\_\_\_      13      \_\_\_\_\_      27      \_\_\_\_\_

---

6.      67      \_\_\_\_\_      81      \_\_\_\_\_      74      \_\_\_\_\_

---

Solve.

7. Frank is thinking of a number closest to 40.  
What number could it be?

\_\_\_\_\_

Name \_\_\_\_\_

## Problem-Solving Application

# Using Data from a Graph

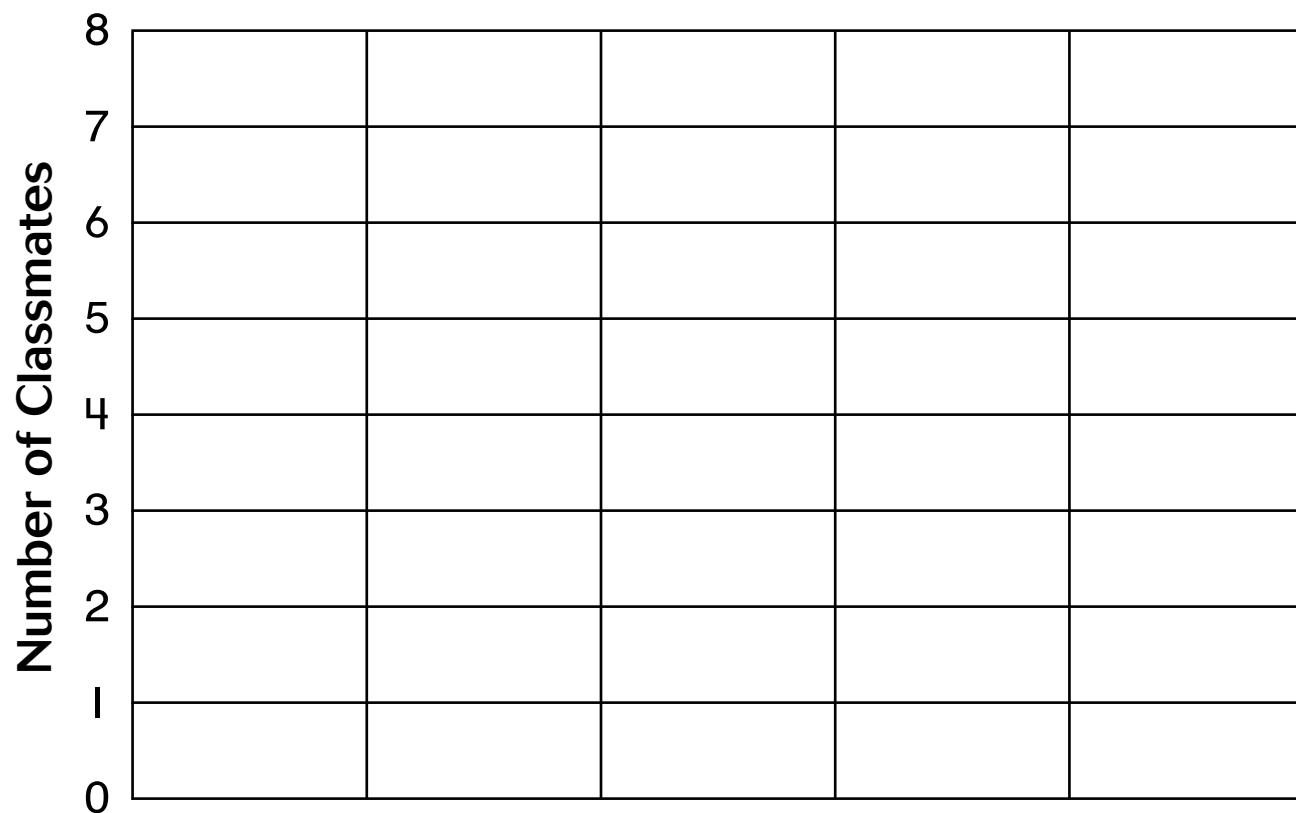
Pick five different colors.

Write their names under the graph.

Ask some classmates which color they like best.

Color a box for each answer.

**Favorite Colors**



\_\_\_\_\_

1. How many people did you ask? \_\_\_\_\_
2. What is the favorite color? \_\_\_\_\_
3. What is the least favorite color? \_\_\_\_\_

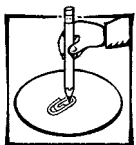
Name \_\_\_\_\_

# Ways to Show Numbers

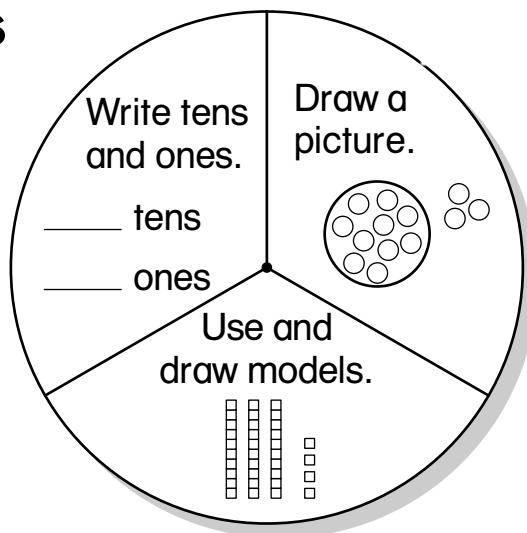
## What You Need

pencil

paper clip



- ① Spin for each number.
- ② Write or draw the number that way.



Number	Ways to show number
1. 53	
2. 29	
3. 67	

Match.

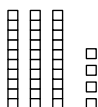
4. 34

1 ten 1 one

5.

46

6. 4 tens 6 ones



Name \_\_\_\_\_

## Counting On Tens

20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79

Use the chart. Count on tens to add.

1.

Add 10.	
27	37
38	
56	
61	

2.

Add 20.	
42	
55	
22	
37	

3.

Add 30.	
20	
25	
34	
49	

4.

Add 10.	
23	
39	
65	
59	

Name \_\_\_\_\_

## Breaking Apart to Add

Break apart numbers to add.

Use tens and ones models if you like.

1.  $60 + 23 = \underline{60} + \underline{20} + \underline{3} = \underline{83}$

2.  $17 + 80 = \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$

3.  $30 + 64 = \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$

4.  $50 + 13 = \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$

5.  $19 + 70 = \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$

Use mental math to add.

6.  $57 + 30 = \underline{\quad}$        $20 + 32 = \underline{\quad}$        $60 + 17 = \underline{\quad}$

7.  $70 + 24 = \underline{\quad}$        $16 + 40 = \underline{\quad}$        $50 + 14 = \underline{\quad}$

8.  $42 + 20 = \underline{\quad}$        $80 + 12 = \underline{\quad}$        $20 + 37 = \underline{\quad}$

9.  $23 + 30 = \underline{\quad}$        $37 + 50 = \underline{\quad}$        $42 + 10 = \underline{\quad}$

10.  $60 + 17 = \underline{\quad}$        $77 + 10 = \underline{\quad}$        $57 + 40 = \underline{\quad}$

11. Kim filled in the boxes with the numbers 2, 3, 4, and 5. Did Kim make the greatest possible sum? \_\_\_\_\_

Kim's Try

$$\begin{array}{|c|c|} \hline 4 & 5 \\ \hline + & 3 & 2 \\ \hline 7 & 7 \\ \hline \end{array}$$

12. Use the numbers 2, 3, 4, and 5 to make the greatest possible sum.

Your Try

$$\begin{array}{|c|c|} \hline \square & \square \\ \hline + & \square & \square \\ \hline \square & \square \\ \hline \end{array}$$

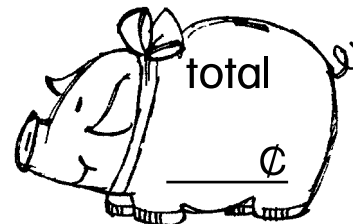


Name \_\_\_\_\_

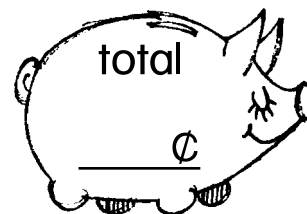
## Pennies, Nickels, and Dimes

Find the value of each group.

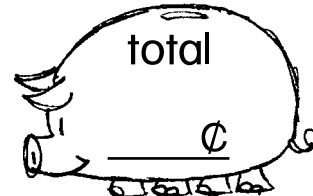
1.



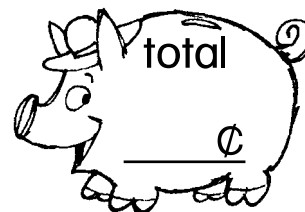
2.



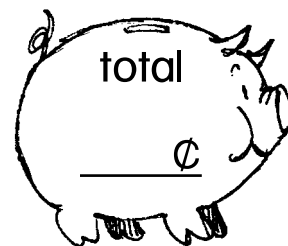
3.



4.



5.



Name \_\_\_\_\_

## Quarters and Half Dollars

Count on to find the value of each group.

1.



total

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

2.



total

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

3.



total

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

4.



total

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

\_\_\_\_\_ ¢











\_\_\_\_\_ ¢

\_\_\_\_\_ ¢

Name \_\_\_\_\_

## Ways to Show Amounts

Use coins to show each amount  
in two different ways. Use tally marks  
to record the coins you use.

Food					
1.  38¢					
2.  79¢					
3.  67¢					
4.  25¢					
5.  72¢					

Name \_\_\_\_\_

## Problem-Solving Application

### Use Data from a Picture

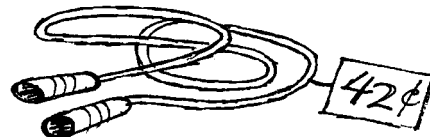
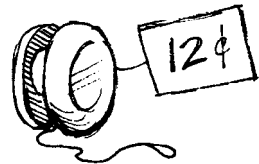
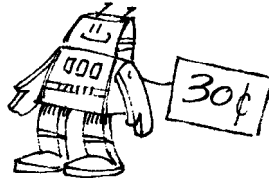
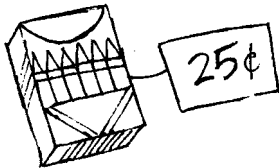
Look at the money. Choose the items you would buy with your money. Color the items you chose.

There are different combinations of toys you could choose.

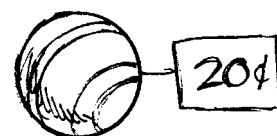
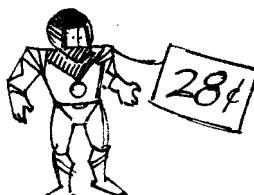
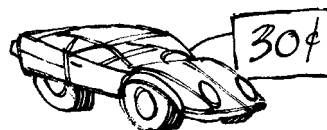
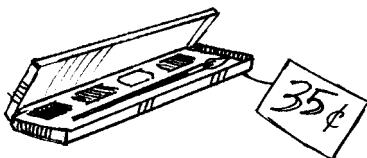


You can't spend more than you have.

1. You have

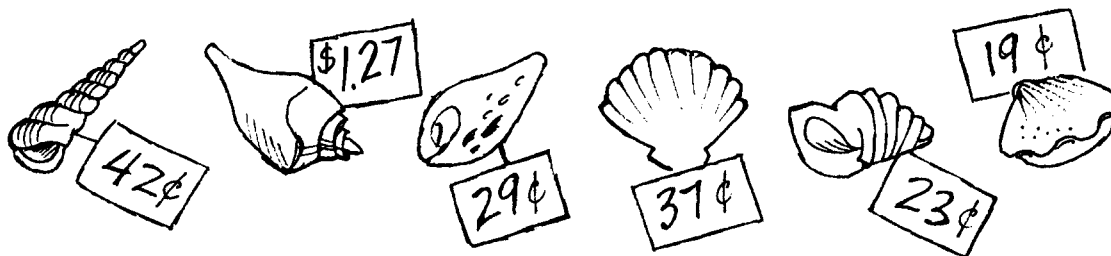


2. You have









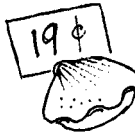





Name \_\_\_\_\_

## Making Change



Use pennies. Count up from the price.

Write how much change you should receive.

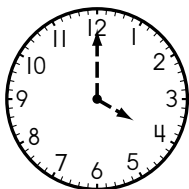
Price	You pay	Your change
1. 		____ ¢
2. 		____ ¢
3. 		____ ¢
4. 		____ ¢
5. 		____ ¢
6. 		____ ¢

Name \_\_\_\_\_

## Time to the Hour and Half Hour

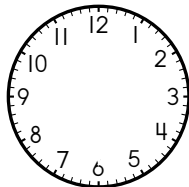
Draw the clock hands. Write the time.

1. four o'clock



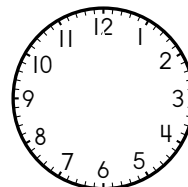
4:00

eight-thirty



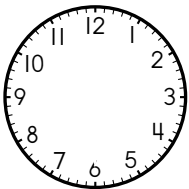
:

three o'clock



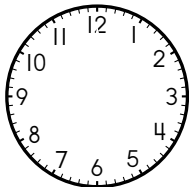
:

2. five-thirty



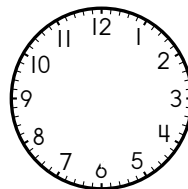
:

two o'clock



:

one-thirty



:

Use the picture to solve.

Write **early** or **late**.

3. Sam arrived at 12:30.

Sam was \_\_\_\_\_.

4. Amy arrived at 1:30.

Amy was \_\_\_\_\_.

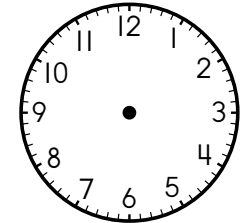


Name \_\_\_\_\_

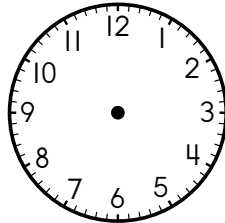
## Telling Time

Record the matching time.

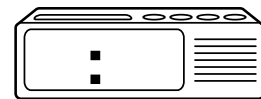
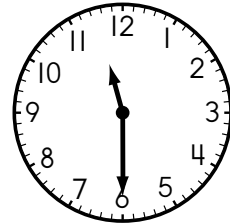
1.



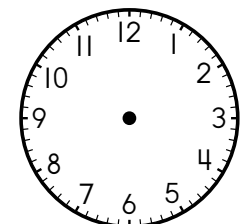
2.



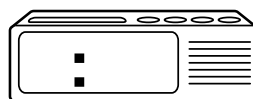
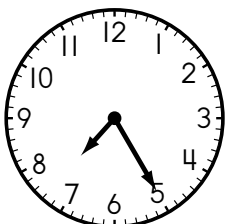
3.



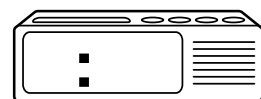
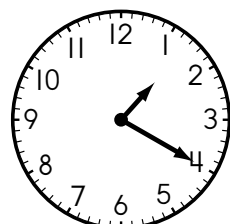
4.



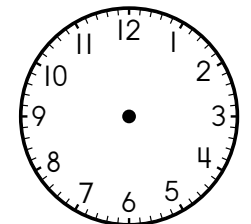
5.



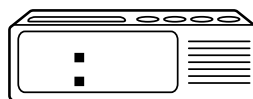
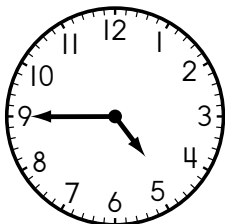
6.



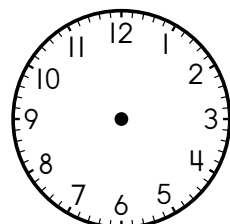
7.



8.

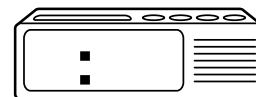
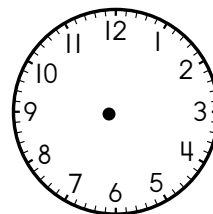


9.



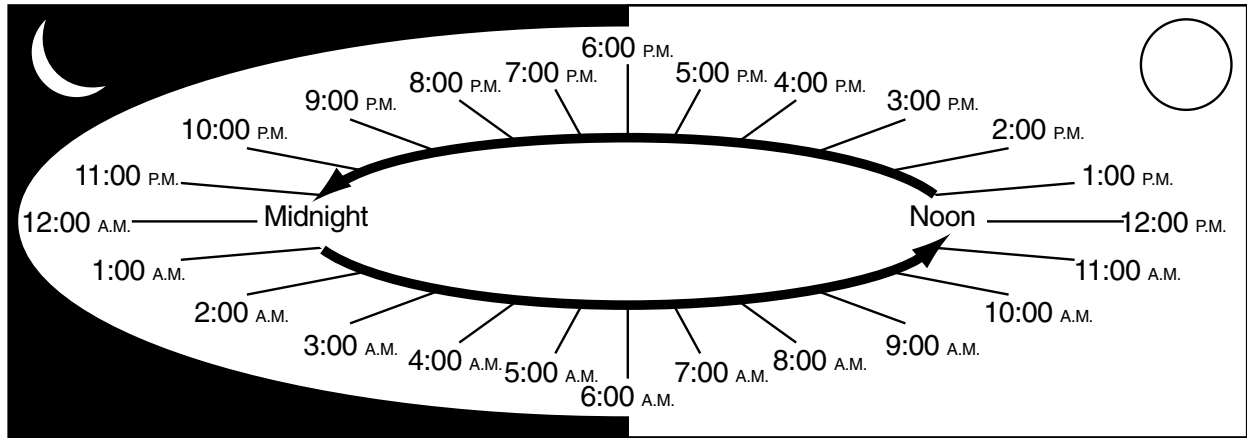
Draw the clock hands. Write the time.

10. Children start to get on the bus at 8:20 for a field trip. The last child gets on 20 minutes later. What time is it?



Name \_\_\_\_\_

## A.M. and P.M.



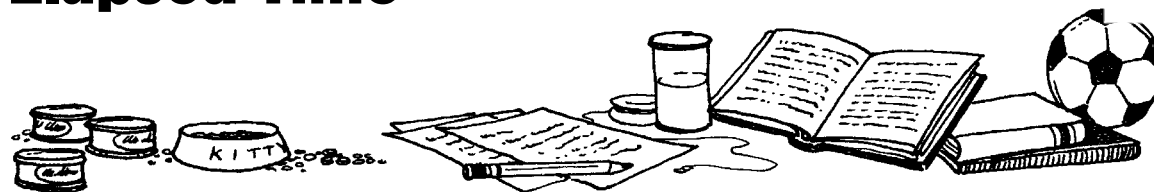
Use the diagram to solve the problems.

1. Yoshi finished dinner at 6 P.M. Then he did homework for an hour. Before he went to bed, he watched TV for an hour. What time did he go to bed? \_\_\_\_\_
2. When Kayla's family went camping, she went to sleep at 11 P.M. She woke up at 7:00 A.M. How long did she sleep? \_\_\_\_\_
3. The second grade students go to lunch at 11:00 A.M. They have 1 hour for lunch. What time do they go back to class? \_\_\_\_\_
4. Ben wakes up at 7 A.M. He usually goes to bed at 8 P.M. For how many hours is he up? \_\_\_\_\_
5. Kristina's ice-skating lesson starts at 11:00 A.M. and lasts for 1 hour. Afterwards, the class practices for 1 hour. What time is it when Kristina is finished? \_\_\_\_\_



Name \_\_\_\_\_

## Elapsed Time



Write each end time.

Activities	Start	Last	End
1. Pick up toys.	4:30	1 hour	__ : __
2. Write a letter.	2:30	30 minutes	__ : __
3. Play soccer.	10:00	1 hour and 30 minutes	__ : __
4. Feed a pet.	5:00	15 minutes	__ : __
5. Read a story.	7:30	30 minutes	__ : __
6. Go to the park.	1:00	2 hours	__ : __

Solve. Use a clock if you like.

7. The play starts at 7:00.

It takes a half hour to pick Katie up.

It takes 1 hour to drive to the theater.

What time should you leave?

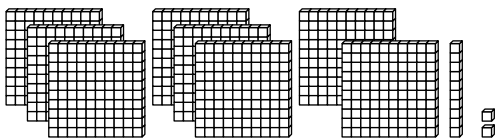
\_\_ : \_\_

Name \_\_\_\_\_

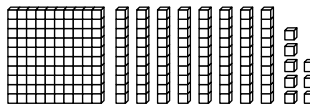
# One Thousand

Write the numbers.

1.

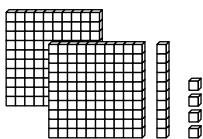


and

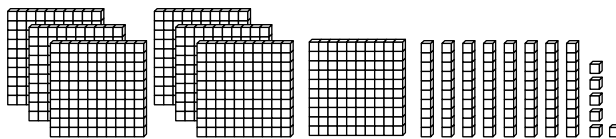


\_\_\_\_\_ and \_\_\_\_\_ is 1,000.

2.

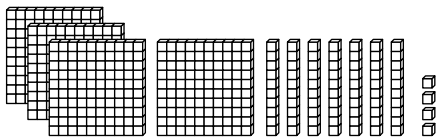


and

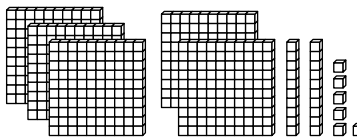


\_\_\_\_\_ and \_\_\_\_\_ is 1,000.

3.

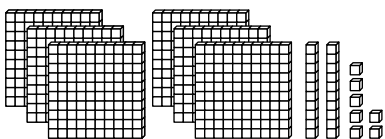


and

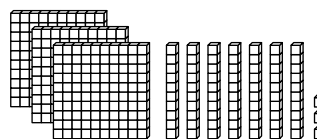


\_\_\_\_\_ and \_\_\_\_\_ is 1,000.

4.

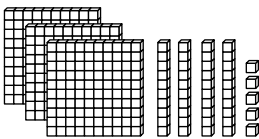


and

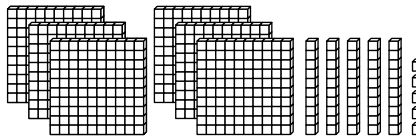


\_\_\_\_\_ and \_\_\_\_\_ is 1,000.

5.



and



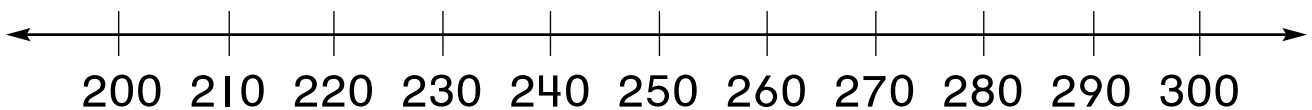
\_\_\_\_\_ and \_\_\_\_\_ is 1,000.

Name \_\_\_\_\_

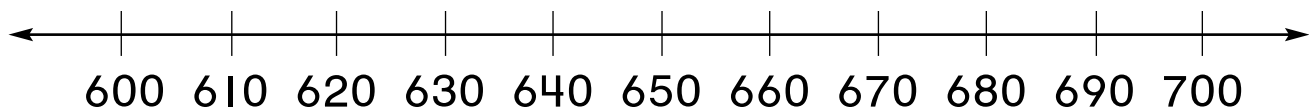
## Rounding to the Nearest Hundred

Use each number line.

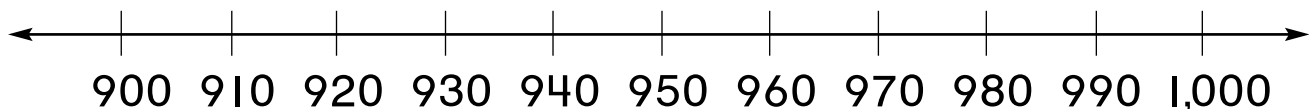
Look for the closer hundred. Complete.



1. 235 is closer to \_\_\_\_\_.      290 is closer to \_\_\_\_\_.
  2. 210 is closer to \_\_\_\_\_.      237 is closer to \_\_\_\_\_.
  3. 258 is closer to \_\_\_\_\_.      291 is closer to \_\_\_\_\_.
- 



4. 611 is closer to \_\_\_\_\_.      667 is closer to \_\_\_\_\_.
  5. 698 is closer to \_\_\_\_\_.      665 is closer to \_\_\_\_\_.
  6. 642 is closer to \_\_\_\_\_.      678 is closer to \_\_\_\_\_.
- 



7. 952 is closer to \_\_\_\_\_.      977 is closer to \_\_\_\_\_.
8. 920 is closer to \_\_\_\_\_.      940 is closer to \_\_\_\_\_.
9. 941 is closer to \_\_\_\_\_.      991 is closer to \_\_\_\_\_.

Name \_\_\_\_\_

# Three-Digit Addition

Find each sum. Use models if you like.

1.

H	T	O
1		
7	9	2
+	1	3
5		
9	2	7

2.

H	T	O
	4	9
+	2	5
3		

3.

H	T	O
3	5	6
+	2	5
6		

4.

H	T	O
7	4	7
+		8
4		

5.

H	T	O
4	2	9
+	3	8
2		

6.

H	T	O
2	7	8
+		5
5		

7.

H	T	O
8	2	4
+	1	4
6		

8.

H	T	O
5	2	7
+	2	3
4		

9.

H	T	O
2	2	9
+	1	7
5		

Write a number sentence.

10. There were 49 people on Bus A. There were 253 on Bus B. How many people were on Buses A and B?

\_\_\_\_\_

11. At the school picnic they served slices of pizza. They served 356 slices of cheese pizza. They served 256 slices of sausage pizza. How many slices of pizza did they serve in all?

\_\_\_\_\_

Name \_\_\_\_\_

## Subtracting Three-Digit Numbers

Subtract. Use models if you like.

1.

H	T	O
<input type="text"/>	5	12
6	<del>6</del>	<del>2</del>
— 4	5	5
2	0	7

2.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
4	4	8
— 3	1	9

3.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
3	7	6
—	9	8

4.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
4	1	0
— 3	6	7

5.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
9	5	4
— 7	0	5

6.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
3	2	5
— 2	9	0

7.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
6	0	4
— 2	9	3

8.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
1	9	8
— 1	8	9

9.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
5	1	7
— 3	0	0

10.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
3	1	5
— 1	2	1

11.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
4	6	5
— 2	3	1

12.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
5	9	8
— 2	0	6

Name \_\_\_\_\_

## Subtracting with Zeros

Subtract.

1.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
3	7	4
— 1	6	6
<input type="text"/>	<input type="text"/>	<input type="text"/>

2.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
6	0	2
— 3	7	8
<input type="text"/>	<input type="text"/>	<input type="text"/>

3.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
7	9	8
— 1	0	2
<input type="text"/>	<input type="text"/>	<input type="text"/>

4.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
9	2	7
—	3	5
<input type="text"/>	<input type="text"/>	<input type="text"/>

5.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
2	4	5
— 1	7	6
<input type="text"/>	<input type="text"/>	<input type="text"/>

6.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
3	4	2
— 1	0	8
<input type="text"/>	<input type="text"/>	<input type="text"/>

7.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
7	3	0
— 4	0	2
<input type="text"/>	<input type="text"/>	<input type="text"/>

8.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
1	2	0
—	4	7
<input type="text"/>	<input type="text"/>	<input type="text"/>

9.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
5	2	9
— 4	0	7
<input type="text"/>	<input type="text"/>	<input type="text"/>

Solve.

10. The school's bike club planned a 175 mile bike trip. After the first stop, club members had ridden 50 miles. How many miles do they have left to go? \_\_\_\_\_

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
—	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>

Name \_\_\_\_\_

## Estimating to Check Answers

Solve each problem. Estimate to check your answer.

Write the answer.

**Solve**

**Check**

1. For the hobby show, the second graders had 210 dolls and 392 toy cars. How many more cars than dolls did they have?

\_\_\_\_\_ cars

$\begin{array}{r} \phantom{00} \\ - \\ \hline \end{array}$
------------------------------------------------------------

$\begin{array}{r} \phantom{00} \\ - \\ \hline \end{array}$
------------------------------------------------------------

2. One team used 617 blocks to build a model skyscraper. Another group used 378 blocks to build a helicopter. How many blocks were used in all?

\_\_\_\_\_ blocks

$\begin{array}{r} \phantom{00} \\ + \\ \hline \end{array}$
------------------------------------------------------------

$\begin{array}{r} \phantom{00} \\ + \\ \hline \end{array}$
------------------------------------------------------------

3. Jimmy collected 689 stamps! Kelly had only 123. How many more stamps did Jimmy have than Kelly?

\_\_\_\_\_ stamps

$\begin{array}{r} \phantom{00} \\ - \\ \hline \end{array}$
------------------------------------------------------------

$\begin{array}{r} \phantom{00} \\ - \\ \hline \end{array}$
------------------------------------------------------------

4. 593 people came to the first day of the hobby show. 320 came to the second day. How many people came in all?

\_\_\_\_\_ people

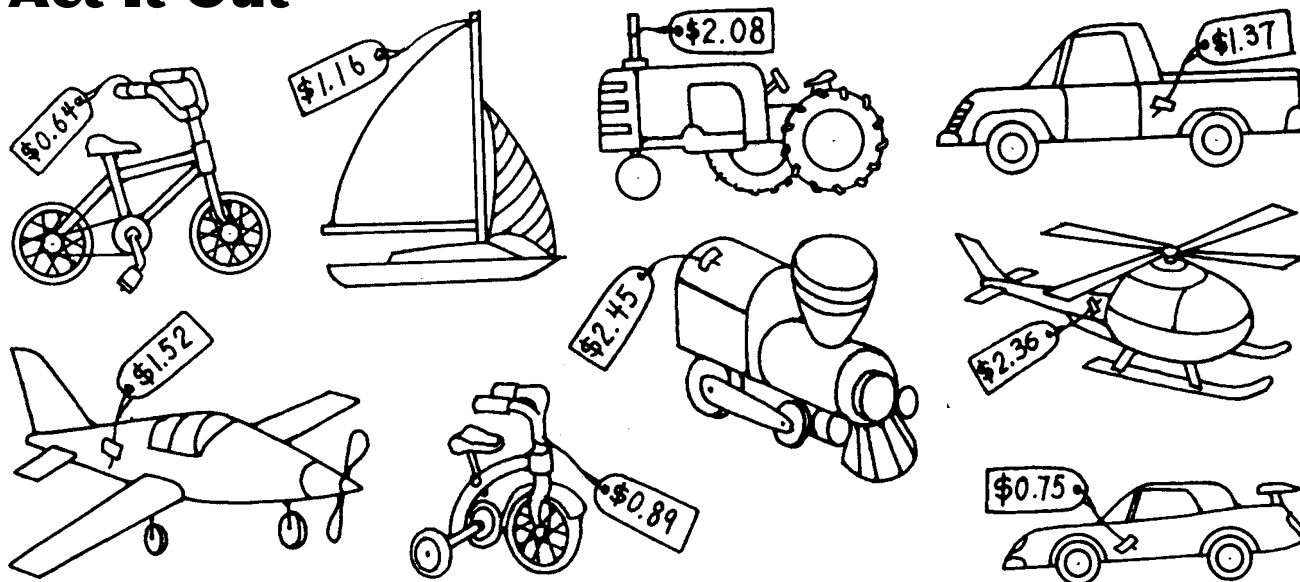
$\begin{array}{r} \phantom{00} \\ + \\ \hline \end{array}$
------------------------------------------------------------

$\begin{array}{r} \phantom{00} \\ + \\ \hline \end{array}$
------------------------------------------------------------

Name \_\_\_\_\_

## Problem-Solving Strategy





### Act It Out



Choose one item to buy for each problem.

Use coins and bills to act the problem out.

Write how much you spend. Find out how much is left.

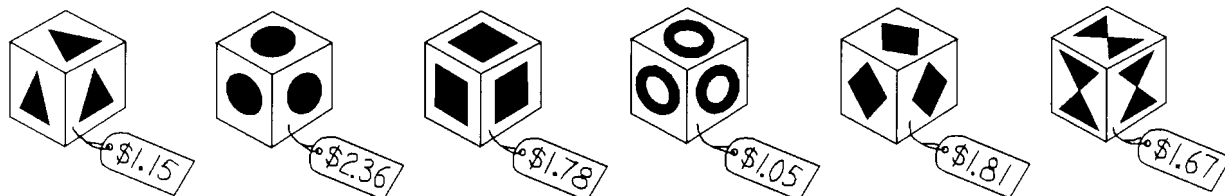
You have	You spend	Amount left
	\$ _____	\$ _____
	\$ _____	\$ _____
	\$ _____	\$ _____
	\$ _____	\$ _____



Name \_\_\_\_\_

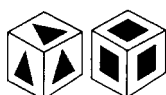
# Adding and Subtracting Money

You can buy these blocks.



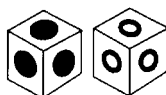
Find the cost for each set of 2 blocks.

1.



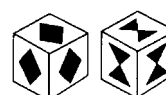
$$\begin{array}{r} \$1.15 \\ + 1.78 \\ \hline \$2.93 \end{array}$$

2.



$$\begin{array}{r} \$ \square \\ + \square \\ \hline \$ \end{array}$$

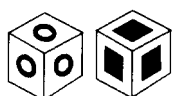
3.



$$\begin{array}{r} \$ \square \\ + \square \\ \hline \$ \end{array}$$

Find the cost of the two blocks. Then find how much you have left after you buy them.

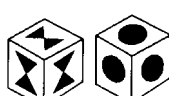
4.



You have \$6.45.

$$\begin{array}{r} \$ \square \\ + \square \\ \hline \$ \end{array} \quad \begin{array}{r} \$ \square \\ - \square \\ \hline \$ \end{array}$$

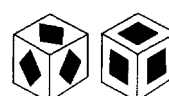
5.



You have \$5.17.

$$\begin{array}{r} \$ \square \\ + \square \\ \hline \$ \end{array} \quad \begin{array}{r} \$ \square \\ - \square \\ \hline \$ \end{array}$$

6.



You have \$5.04.

$$\begin{array}{r} \$ \square \\ + \square \\ \hline \$ \end{array} \quad \begin{array}{r} \$ \square \\ - \square \\ \hline \$ \end{array}$$

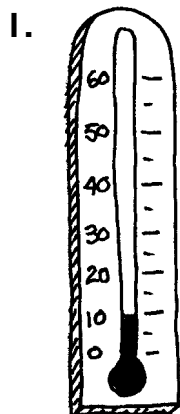
Name \_\_\_\_\_

## Temperature

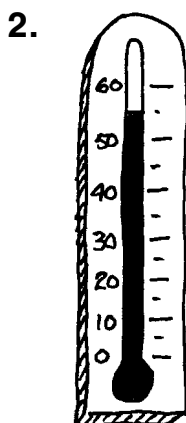
Write each temperature.

Circle the warmest temperature.

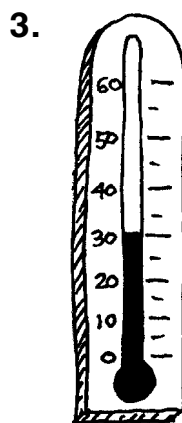
Put an X on the coldest temperature.



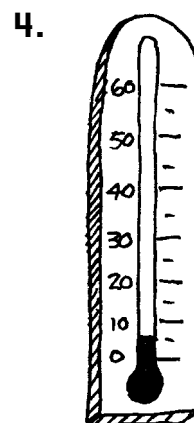
\_\_\_\_\_ °C



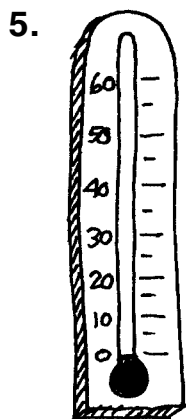
\_\_\_\_\_ °C



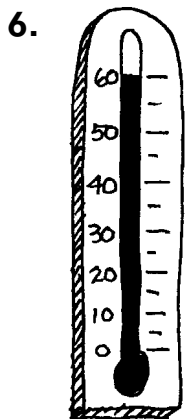
\_\_\_\_\_ °C



\_\_\_\_\_ °C



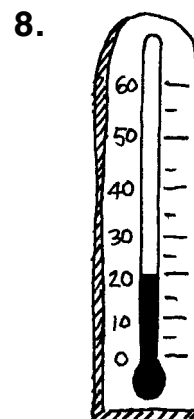
\_\_\_\_\_ °C



\_\_\_\_\_ °C



\_\_\_\_\_ °C

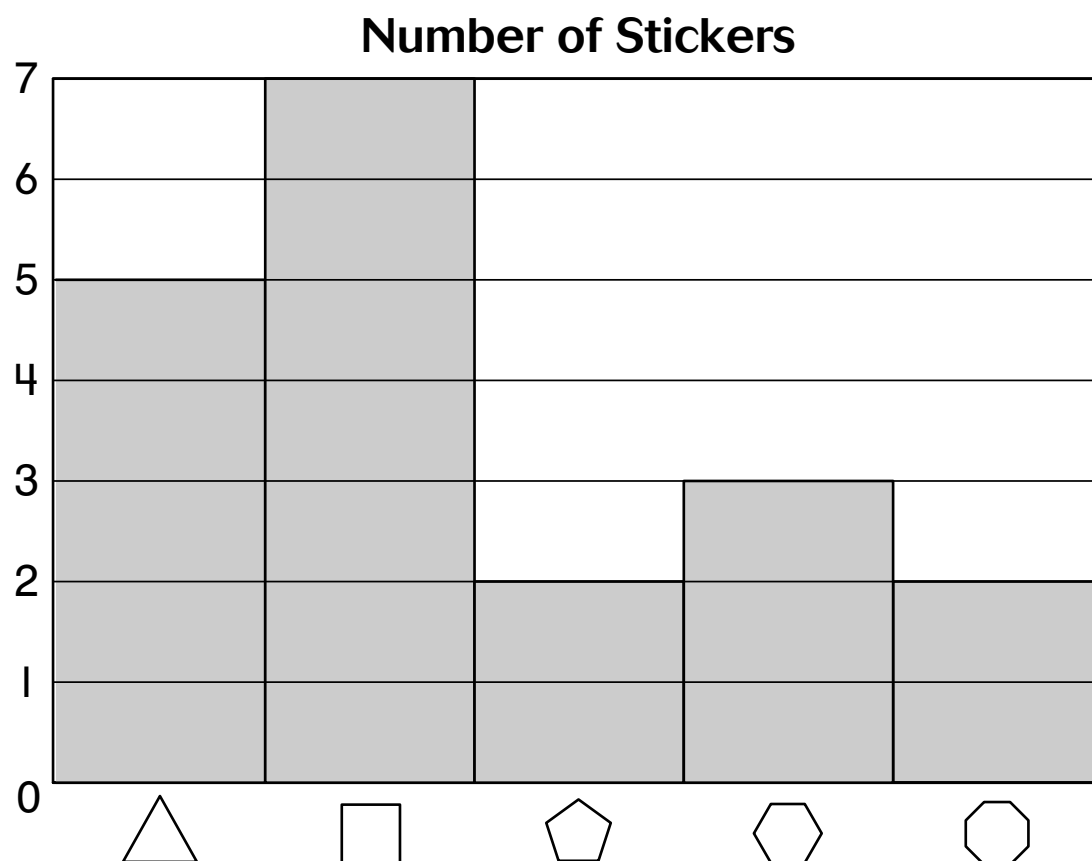


\_\_\_\_\_ °C

Name \_\_\_\_\_

## Vertices and Sides

Paula collects stickers. She made a graph to show how many of each sticker she has. Use the graph to answer the questions.



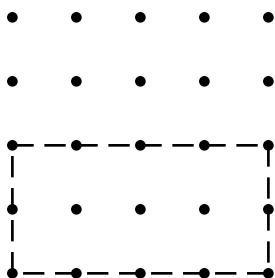
1. How many stickers have exactly four sides? \_\_\_\_\_
2. How many stickers have exactly five vertices? \_\_\_\_\_
3. How many stickers have more than three sides? \_\_\_\_\_
4. How many stickers have fewer than six vertices? \_\_\_\_\_
5. How many stickers have three sides or more? \_\_\_\_\_

Name \_\_\_\_\_

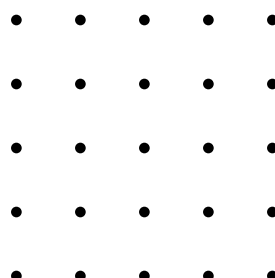
## Perimeter

Draw each shape with the perimeter given.

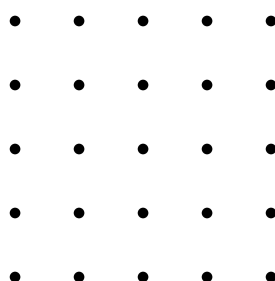
1. rectangle,  
12 centimeters around



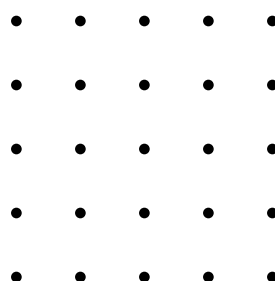
2. square,  
12 centimeters around



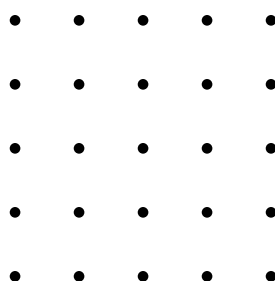
3. rectangle,  
10 centimeters around



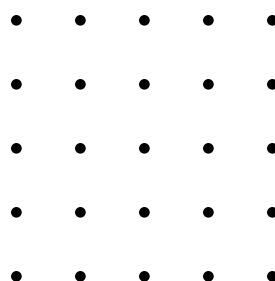
4. square,  
8 centimeters around



5. rectangle,  
14 centimeters around



6. square,  
4 centimeters around



Name \_\_\_\_\_

### Problem-Solving Strategy

## Make a Graph

Sea turtles travel many miles.

Here's how far four turtles traveled:

Turtle A traveled 4 miles. Turtle B traveled 1 more mile than Turtle A. Turtle C traveled 3 more miles than Turtle A. Turtle D traveled only 1 mile.



1. Finish the graph to show how far each turtle traveled.

Use the graph to answer these questions:

2. Which two turtles traveled the farthest?

\_\_\_\_\_

3. How many more miles did Turtle B travel than Turtle D?

\_\_\_\_\_

4. How many more miles did Turtle C travel than Turtle B?

\_\_\_\_\_

5. How many miles did the turtles travel altogether?

\_\_\_\_\_

Name \_\_\_\_\_

## Problem-Solving Application

### Using Pictographs

Mr. Holtz uses a pictograph to show how many reading groups go to the library in the afternoon.

Day	Groups to the library ☺ = a group of 4 children
Mon.	☺ ☺ ☺
Tues.	☺ ☺
Wed.	☺ ☺ ☺ ☺ ☺
Thurs.	☺
Fri.	☺ ☺ ☺ ☺

Use the graph to answer the questions.

1. How many children go to the library each day?

Monday \_\_\_\_\_ Tuesday \_\_\_\_\_ Wednesday \_\_\_\_\_

Thursday \_\_\_\_\_ Friday \_\_\_\_\_ in all \_\_\_\_\_

2. If 3 more groups went to the library on Monday, how many children in all would go on Monday?

\_\_\_\_\_ children

3. Last week 2 Friday groups switched to Wednesday. How many children in all went to the library on Wednesday?

\_\_\_\_\_ children

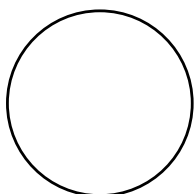
How many went on Friday? \_\_\_\_\_ children

Name \_\_\_\_\_

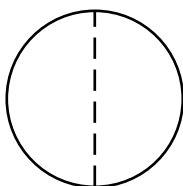
## Equal Parts

Draw lines to show equal parts.

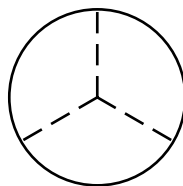
1.



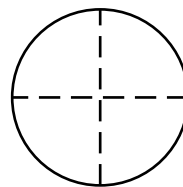
whole



2 parts  
halves

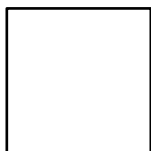


3 parts  
thirds

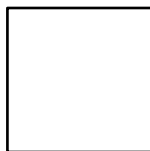


4 parts  
fourths

2.



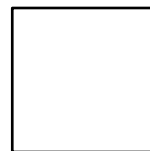
whole



2 parts  
halves

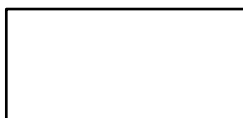


3 parts  
thirds

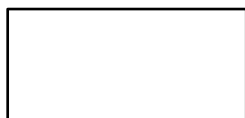


4 parts  
fourths

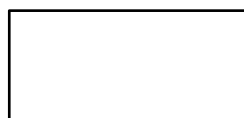
3.



whole



2 parts  
halves



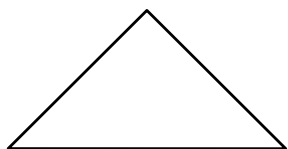
3 parts  
thirds



4 parts  
fourths

Draw to show two parts.

4.

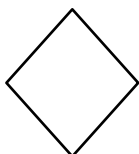


equal parts

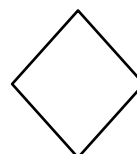


not equal parts

5.



equal parts



not equal parts

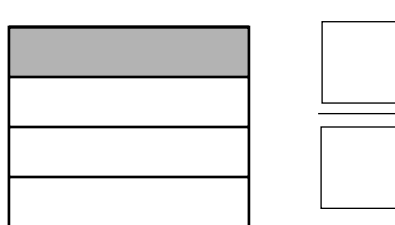
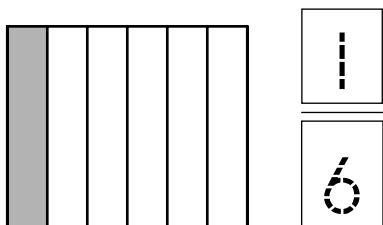
Name \_\_\_\_\_

## Comparing Unit Fractions

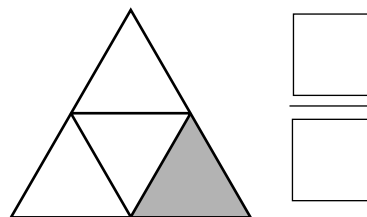
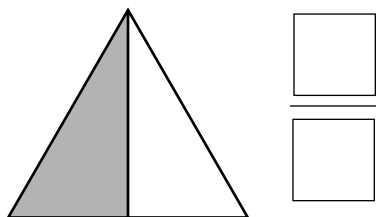
Write the fraction that tells how much is shaded.

For each pair, circle the fraction that is less.

1.



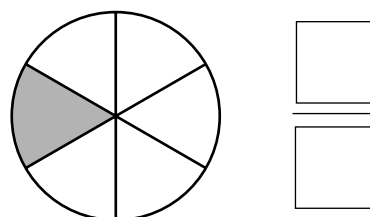
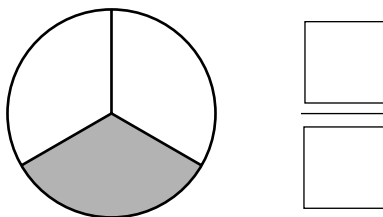
2.



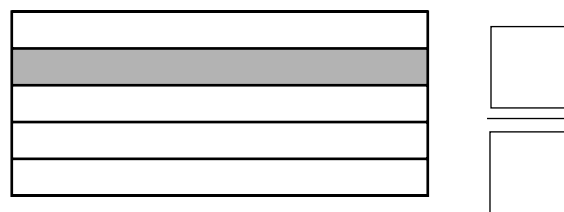
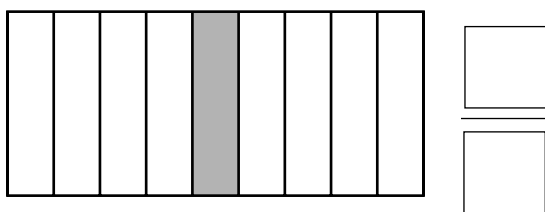
Write the fraction that tells how much is shaded.

For each pair, circle the fraction that is greater.

3.



4.



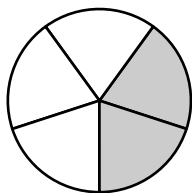


Name \_\_\_\_\_

## Working with Fractions

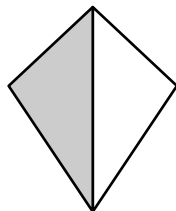
Write the fraction that names the shaded parts.

1.



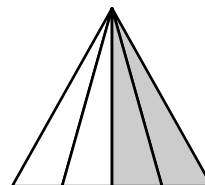
parts shaded  $\frac{2}{5}$   
parts in all

2.



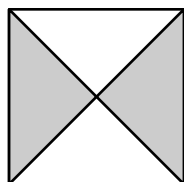
parts shaded \_\_\_\_\_  
parts in all

3.



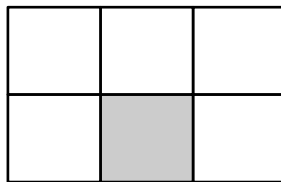
parts shaded \_\_\_\_\_  
parts in all

4.



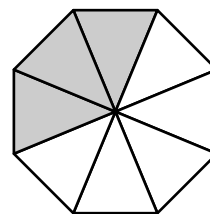
parts shaded \_\_\_\_\_  
parts in all

5.



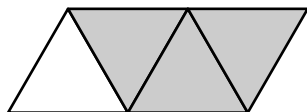
parts shaded \_\_\_\_\_  
parts in all

6.



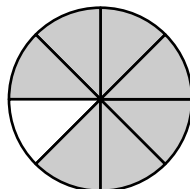
parts shaded \_\_\_\_\_  
parts in all

7.



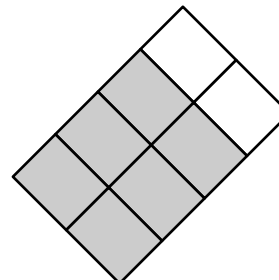
parts shaded \_\_\_\_\_  
parts in all

8.



parts shaded \_\_\_\_\_  
parts in all

9.



parts shaded \_\_\_\_\_  
parts in all

Name \_\_\_\_\_

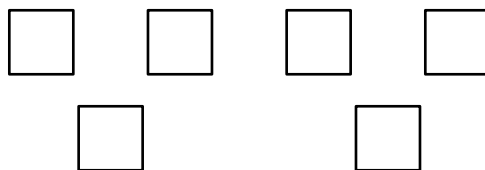
## Fractions of a Group

Circle part of each group to show the fraction.

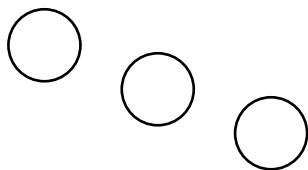
1.  $\frac{3}{5}$



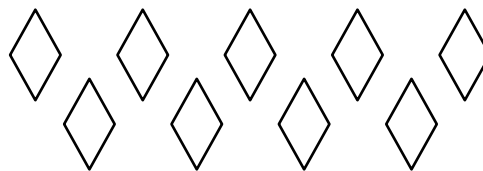
2.  $\frac{4}{6}$



3.  $\frac{2}{3}$



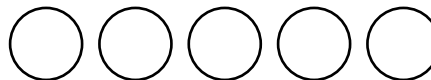
4.  $\frac{5}{9}$



5.  $\frac{3}{6}$



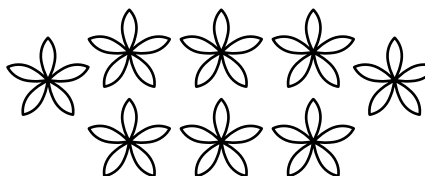
6.  $\frac{1}{5}$



7.  $\frac{2}{4}$



8.  $\frac{5}{8}$



Name \_\_\_\_\_

### Problem-Solving Application

## Finding Fractions of a Group

Solve each problem.

Use counters to help you.

1. Sarah has 8 muffins.  
 $\frac{1}{4}$  of the muffins are  
raisin. How many muffins  
are raisin?

$$\frac{1}{4} \text{ of } 8 = \underline{\hspace{2cm}}$$

2. Dustin has 10 baseball cards.  
 $\frac{2}{5}$  of the cards are Los amigos  
players. How many cards are  
Los amigos players?

$$\frac{2}{5} \text{ of } 10 = \underline{\hspace{2cm}}$$

3. Callie bought 16 new  
pencils.  $\frac{5}{8}$  of the pencils  
are purple. How many  
pencils are purple?

$$\frac{5}{8} \text{ of } 16 = \underline{\hspace{2cm}}$$

4. Augie the dog has 6 bones.  
 $\frac{2}{3}$  of the bones are buried  
in the yard. How many bones  
are buried in the yard?

$$\frac{2}{3} \text{ of } 6 = \underline{\hspace{2cm}}$$

5. Maggie borrowed  
20 books from the library.  
 $\frac{1}{2}$  of the books are about  
animals. How many books  
are about animals?

$$\frac{1}{2} \text{ of } 20 = \underline{\hspace{2cm}}$$

6. Mike bought 12 gumballs  
from the gumball machine.  
 $\frac{6}{6}$  of the gumballs are blue.  
How many gumballs are  
blue?

$$\frac{6}{6} \text{ of } 12 = \underline{\hspace{2cm}}$$

Name \_\_\_\_\_

## Recording Data from a Survey

1. Take a survey. First, write four activities on the chart. Then ask classmates which activity they like best. Tally the answers. Then write the total.

**Activities**

Activity	Tally	Total

2. Make a bar graph. Color one box for each time an activity was chosen.

**Activities**


0 1 2 3 4 5 6 7 8

3. What activity do children like the best?

\_\_\_\_\_

Name \_\_\_\_\_

### Problem-Solving Strategy

## Make a Table

Label five  $3 \times 5$  cards 1–5 with a friend and pick two cards.

Use tally marks to record the sum.

Pick two cards at least 20 times.

1. Record your data in the table below.

Sum	Tallies	Total
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

2. Which sum came up the most often? \_\_\_\_\_

3. How does a table help you? \_\_\_\_\_

---

---

Name \_\_\_\_\_

## Multiplying by 10

Find each product.

1.  $3 \times 10 =$  \_\_\_\_\_  $2 \times 10 =$  \_\_\_\_\_

$10 \times 9 =$  \_\_\_\_\_  $10 \times 8 =$  \_\_\_\_\_

2. 
$$\begin{array}{r} 10 \\ \times 4 \\ \hline \end{array}$$
 
$$\begin{array}{r} 6 \\ \times 10 \\ \hline \end{array}$$
 
$$\begin{array}{r} 1 \\ \times 10 \\ \hline \end{array}$$
 
$$\begin{array}{r} 10 \\ \times 5 \\ \hline \end{array}$$
 
$$\begin{array}{r} 10 \\ \times 7 \\ \hline \end{array}$$

---

Complete each table. Follow the rule.

3. Multiply by 5.

2	
4	
6	
8	

4. Multiply by 10.

2	
4	
6	
8	

5. What pattern do you see in the two tables?

---

---

---

---

Name \_\_\_\_\_

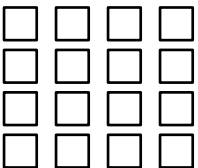
## Modeling Division

Circle equal groups. Write the number in all.


Write the number in each group.

1.  25 in all      5 groups of 5

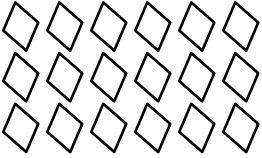
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2.  \_\_\_\_\_ in all      4 groups of \_\_\_\_\_

---

3.  \_\_\_\_\_ in all      3 groups of \_\_\_\_\_

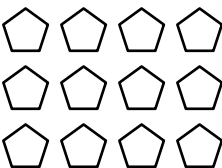
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4.  \_\_\_\_\_ in all      3 groups of \_\_\_\_\_

---

5.  \_\_\_\_\_ in all      2 groups of \_\_\_\_\_

---

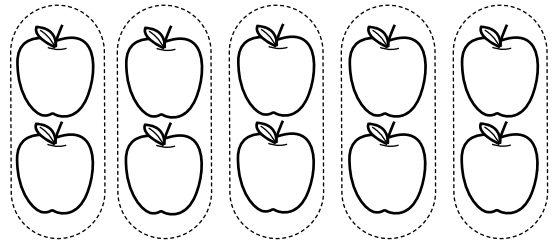
6.  \_\_\_\_\_ in all      3 groups of \_\_\_\_\_

Name \_\_\_\_\_

## Division as Sharing

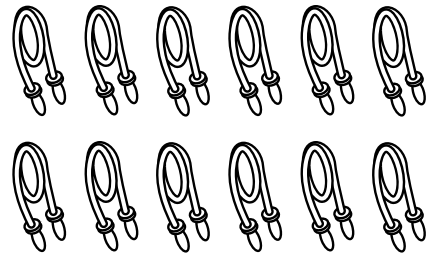
Make equal groups to solve.

1. Annie has 10 apples to give to 5 friends. How many apples will each friend get?



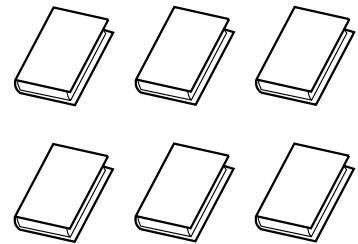
Each friend will get 2 apples.

2. Mr. Unger has 12 jump ropes to give to 4 groups in gym class. How many jump ropes can he give each group?



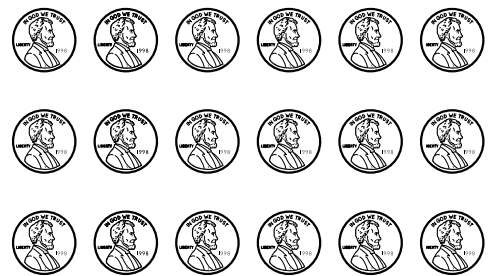
He can give each group \_\_\_\_ jump ropes.

3. The librarian has 6 new books. 3 children want to check the books out. How many books can each child check out?



Each child can check out \_\_\_\_ books.

4. 6 children have 18 pennies to share. How many pennies will each child get?



Each child will get \_\_\_\_ pennies.



Name \_\_\_\_\_

## **Division with Remainders**

Use counters to solve. Draw to show what you did.

1. Brittany bought 14 seeds.  
She can plant 3 in a row.  
How many rows can she plant?  
Brittany can plant \_\_\_\_ rows.  
How many seeds are left over?      \_\_\_\_ seeds are left over.  

---
2. Fred gathered 27 eggs. He  
can put 12 eggs in a carton.  
How many cartons can he fill?  
Fred can fill \_\_\_\_ cartons.  
How many eggs are left over?      \_\_\_\_ eggs are left over.  

---
3. Lucy has 20 tennis balls. She  
can put 3 in a container. How  
many containers can she fill?  
Lucy can fill \_\_\_\_ containers.  
How many balls are left over?      \_\_\_\_ balls are left over.  

---
4. Jen's mom bought 18 apples.  
She can put 5 in a basket.  
How many baskets can she  
fill with apples?  
Jen can fill \_\_\_\_ baskets.  
How many apples are left over?      \_\_\_\_ apples are left over.

Name \_\_\_\_\_

### Problem-Solving Strategy

## Write a Number Sentence

Write a division sentence to solve.

Use counters if you wish.

1. Sean needs to carry 15 volleyballs to practice. Only 5 fit in a bag. How many bags does Sean need?

$$\underline{15} \div \underline{5} = \underline{3} \text{ bags}$$

2. The librarian has 18 bookmarks to give to children. The librarian gives 6 children each an equal number of bookmarks. How many bookmarks does each child get?

$$\underline{\quad} \div \underline{\quad} = \underline{\quad} \text{ bookmarks}$$

3. At the apple orchard, 4 children pick 16 apples. If they each pick an equal number of apples, how many apples does each child pick?

$$\underline{\quad} \div \underline{\quad} = \underline{\quad} \text{ apples}$$

4. In music class, 18 children share 9 drums equally. How many children share each drum?

$$\underline{\quad} \div \underline{\quad} = \underline{\quad} \text{ children}$$

5. Kristina found 20 seashells. If she puts an equal number in 2 glass jars, how many shells can she put in each jar?

$$\underline{\quad} \div \underline{\quad} = \underline{\quad} \text{ shells}$$

6. Mrs. Jones has 20 students to place at 4 tables for art class. If she places an equal number of students at each table, how many students are at each table?

$$\underline{\quad} \div \underline{\quad} = \underline{\quad} \text{ students}$$

Name \_\_\_\_\_

## Reading and Writing Four-Digit Numbers

Write each number in standard form.

1. four thousand, five hundred thirty-seven \_\_\_\_\_
2. seven thousand, one hundred ten \_\_\_\_\_
3. two thousand, sixty-two \_\_\_\_\_

Complete the table below.

	Number in Expanded Form	Write the Standard Form	Write the Value of 1
4.	$3,000 + 100 + 50 + 4$		
5.	$1,000 + 300 + 20 + 8$		
6.	$8,000 + 200 + 40 + 1$		
7.	$5,000 + 400 + 10 + 9$		
8.	$4,000 + 100 + 30 + 0$		

Write each number in words.

9. 459 \_\_\_\_\_
10. 6,205 \_\_\_\_\_
11. 8,981 \_\_\_\_\_

**Algebra** What missing number would make the sentence true?

12.  $3,000 + 500 + \bigcirc + 6 = 3,546$       13.  $6,000 + \bigcirc + 90 + 1 = 6,891$

\_\_\_\_\_

\_\_\_\_\_

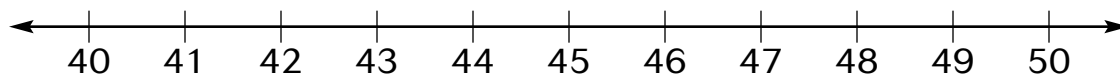
**Test Prep** Circle the correct letter for each answer.

14. In which number is the value of 8, eight thousand?  
**A** 3,982      **C** 5,849  
**B** 1,008      **D** 8,001
15. In which number is the value of 3, three ones?  
**F** 2,231      **H** 4,923  
**G** 7,304      **J** 3,978

Name \_\_\_\_\_

## Rounding to the Nearest Ten and Hundred

Use the number line. Round to the nearest ten.

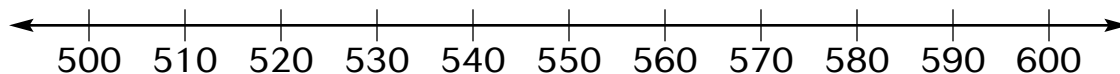


1. 47 \_\_\_\_\_      2. 48 \_\_\_\_\_      3. 43 \_\_\_\_\_      4. 40 \_\_\_\_\_

Round to the nearest ten.

5. 24 \_\_\_\_\_      6. 18 \_\_\_\_\_      7. 53 \_\_\_\_\_      8. 68 \_\_\_\_\_  
9. 78 \_\_\_\_\_      10. 71 \_\_\_\_\_      11. 8 \_\_\_\_\_      12. 96 \_\_\_\_\_

Use the number line. Round to the nearest hundred.



13. 516 \_\_\_\_\_      14. 552 \_\_\_\_\_      15. 535 \_\_\_\_\_      16. 521 \_\_\_\_\_

Round to the nearest hundred.

17. 393 \_\_\_\_\_      18. 879 \_\_\_\_\_      19. 779 \_\_\_\_\_      20. 681 \_\_\_\_\_  
21. 458 \_\_\_\_\_      22. 113 \_\_\_\_\_      23. 506 \_\_\_\_\_      24. 284 \_\_\_\_\_  
25. Jim has 87 baseball cards. About how many cards does he have? \_\_\_\_\_

**Test Prep** Circle the correct letter for the answer.

26. Round to the nearest ten.  
Which number rounds to 60?

**A** 17  
**B** 72  
**C** 64  
**D** 22

27. Round to the nearest hundred.  
Which number rounds to 400?

**F** 239  
**G** 798  
**H** 378  
**J** 540

Name \_\_\_\_\_

## Rounding Larger Numbers

Round each number to the nearest thousand.

- |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|
| <b>1.</b> 3,400 _____ | <b>2.</b> 5,800 _____ | <b>3.</b> 8,100 _____ |
| <b>4.</b> 3,492 _____ | <b>5.</b> 8,692 _____ | <b>6.</b> 2,599 _____ |
| <b>7.</b> 7,003 _____ | <b>8.</b> 4,789 _____ | <b>9.</b> 2,798 _____ |

Round each number to the nearest hundred.

- |                        |                        |                        |
|------------------------|------------------------|------------------------|
| <b>10.</b> 3,482 _____ | <b>11.</b> 8,721 _____ | <b>12.</b> 4,592 _____ |
| <b>13.</b> 7,756 _____ | <b>14.</b> 9,104 _____ | <b>15.</b> 3,271 _____ |
| <b>16.</b> 1,570 _____ | <b>17.</b> 2,179 _____ | <b>18.</b> 5,921 _____ |

Round each number to the nearest ten.

- |                        |                        |                        |
|------------------------|------------------------|------------------------|
| <b>19.</b> 3,284 _____ | <b>20.</b> 6,794 _____ | <b>21.</b> 1,647 _____ |
| <b>22.</b> 4,508 _____ | <b>23.</b> 5,555 _____ | <b>24.</b> 8,539 _____ |
| <b>25.</b> 2,438 _____ | <b>26.</b> 7,777 _____ | <b>27.</b> 9,878 _____ |

- 28.** Jessica's family would like to buy a television set that costs \$1,289.00. Would they need about

\$1,200.00 or \$1,300.00? \_\_\_\_\_

**Test Prep** Circle the correct letter for the answer.

- |                                          |                                          |
|------------------------------------------|------------------------------------------|
| <b>29.</b> Which number rounds to 5,000? | <b>30.</b> Which number rounds to 7,000? |
| <b>A</b> 5,793                           | <b>F</b> 6,398                           |
| <b>B</b> 6,860                           | <b>G</b> 4,872                           |
| <b>C</b> 4,879                           | <b>H</b> 7,949                           |
| <b>D</b> 5,500                           | <b>J</b> 7,186                           |

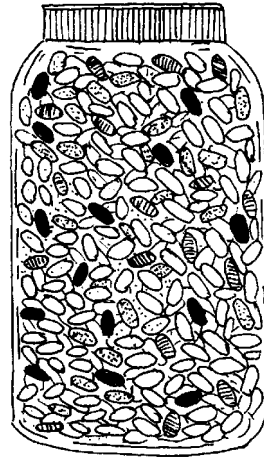
Name \_\_\_\_\_

### Problem-Solving Skill

## Exact Numbers or Estimates

Circle the best choice for each question.

Jaime's school had a jelly bean contest. About 60 students tried to guess the number of jelly beans in a jar without going over the total. Most students guessed about 400. There were exactly 281 jelly beans in the jar. Jaime's guess of 270 was the closest. He won the jar of jelly beans and \$10.



1. Which word helps you know that *400 jelly beans* is an estimate?
  - a. thought
  - b. about
  - c. guesses
2. Which sentence tells you how many jelly beans were in the jar?
  - a. Most students guessed about 400.
  - b. Jaime's guess of 270 was the closest.
  - c. There were exactly 281 jelly beans in the jar.
3. Which word helps you know that 60 is an estimate?
  - a. about
  - b. students
  - c. guess
4. Is \$10 a guess, an exact amount, or an estimate?
  - a. a guess
  - b. an exact amount
  - c. an estimate
5. There are 5 numbers in the story. How many of the numbers are estimates?
  - a. all of the numbers
  - b. one of the numbers
  - c. three of the numbers
6. Which number below could tell how many students took part in the contest?
  - a. 42
  - b. 58
  - c. 67

Name \_\_\_\_\_

## Extending Place-Value Concepts

Write each number in standard form.

1.  $70,000 + 100 + 90 + 2$  \_\_\_\_\_
2.  $900,000 + 2,000 + 500 + 40 + 1$  \_\_\_\_\_
3. nine hundred ninety-nine thousand, thirty \_\_\_\_\_
4. four hundred two thousand, six hundred one \_\_\_\_\_

Write the value of the digit 5 in each number.

- |                 |                  |
|-----------------|------------------|
| 5. 50,143 _____ | 6. 625,002 _____ |
| 7. 99,945 _____ | 8. 567,361 _____ |

Give the next number in the pattern.

9. 810,000    820,000    830,000 \_\_\_\_\_
10. 59,600    59,700    59,800 \_\_\_\_\_

Solve.

- |                                                                                                                                                |                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>11.</b> A football stadium had 43,000 seats. A new section with 10,000 seats was added. How many seats are in the stadium now?<br><br>_____ | <b>12.</b> A calculator display shows the number 850. You want it to show 9,850. What should you do to the displayed number?<br><br>_____ |
|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|

**Test Prep** Circle the correct letter for each answer.

- |                                                                                                                              |                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <b>13.</b> Which number has six ten thousands?<br><br><b>A</b> 458,689 <b>C</b> 468,896<br><b>B</b> 496,898 <b>D</b> 486,898 | <b>14.</b> What is the value of the underlined digit? 839, <u>2</u> 79<br><br><b>F</b> 2000 <b>H</b> 200<br><b>G</b> 20 <b>J</b> 2 |
|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|

Name \_\_\_\_\_

## Counting Coins and Bills

Write each value.

1.



\_\_\_\_\_

2.



\_\_\_\_\_

3. 2 five-dollar bills, 2 one-dollar bills \_\_\_\_\_

4. 6 one-dollar bills, 3 quarters \_\_\_\_\_

5. 3 ten-dollar bills, 1 one-dollar bill, 2 quarters, 1 nickel \_\_\_\_\_

Solve.

6. Cindy has 7 coins worth 55¢. What coins could Cindy have? \_\_\_\_\_

\_\_\_\_\_

7. Ben has 20 coins. They are all quarters, dimes, or nickels. What is the greatest amount of money Ben could have if seven are nickels? What is the smallest amount if three are quarters?

\_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

8. Rose has seven coins worth 15¢. What coins could she have?

- A** five dimes and two pennies
- B** two quarters and five pennies
- C** two nickels and five pennies
- D** five dimes, and one nickel

9. What is the total value of three \$1 bills, 1 quarter, 2 dimes, 1 penny?

- F** \$3.35
- G** \$1.46
- H** \$3.46
- J** \$1.47



Name \_\_\_\_\_

## **Problem-Solving Application**

### **Using Money**

Solve.

- 1.** Shelly gave the clerk \$2.00 to pay for a birthday card that costs \$1.59. What coins could Shelly have received for change?

\_\_\_\_\_

- 2.** Jules bought a game for \$8.68. He gave the clerk a \$10 bill. What coins and bills could Jules have received for change?

\_\_\_\_\_

- 3.** Greta received 6 coins change from a \$5 bill. She made a \$4.37 purchase. Three of the coins were pennies. What were the other three coins?

\_\_\_\_\_

- 4.** Ron spent \$5.75 playing video games and \$1.25 on a basketball-shooting game. Geraldo bought an all-day pass for \$8.00. Who will receive more change back from a \$10 bill? Explain.

\_\_\_\_\_

\_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

- 5.** Tom buys a painting set for \$3.74. If he pays with a \$5 bill, what change would he most likely receive?

**A** 126 pennies  
**B** 1 penny and 5 quarters  
**C** 1 penny, 1 nickel, and 12 dimes  
**D** 1 penny, 1 quarter, and 1 dollar  
**E** NH

- 6.** Liz buys a book for \$6.47 and gives the clerk \$10.00. She will receive 53¢ and how many dollar bills?

**F** one dollar bill  
**G** two dollar bills  
**H** three dollar bills  
**J** four dollar bills  
**K** NH

Name \_\_\_\_\_

## Estimating Sums

Estimate by rounding to the nearest ten.

1.  $28 + 54 =$  \_\_\_\_\_

2.  $37 + 78 =$  \_\_\_\_\_

3.  $63 + 87 =$  \_\_\_\_\_

4.  $92 + 21 =$  \_\_\_\_\_

5. 
$$\begin{array}{r} 85 \\ + 67 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 64 \\ + 89 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 96 \\ + 6 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 58 \\ + 15 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 22 \\ + 81 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 54 \\ + 7 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 88 \\ + 99 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 16 \\ + 77 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 91 \\ + 79 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 76 \\ + 37 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 55 \\ + 86 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 47 \\ + 65 \\ \hline \end{array}$$

Estimate by rounding to the nearest hundred.

17. 
$$\begin{array}{r} 489 \\ + 922 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 832 \\ + 659 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 604 \\ + 530 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 823 \\ + 493 \\ \hline \end{array}$$

21. Tim has 592 stamps in his collection. Steve has 932 stamps in his collection.  
About how many stamps do they have together? \_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

22. Estimate by rounding to the nearest ten.  $36 + 29 =$

**A** 60

**C** 80

**B** 70

**D** 90

23. Estimate by rounding to the nearest hundred.  $269 + 601 =$

**F** 700

**H** 900

**G** 800

**J** 1,000

Name \_\_\_\_\_

## Problem-Solving Strategy

### Make a Table

Make a table to solve each problem.

1. Rita lifts a weight 6 times in 1 minute. How many minutes will it take her to lift the same weight 30 times?

Number of lifts					
Minutes					

2. Phil does 3 sit-ups on the first day of school. He doubles the number of sit-ups he does every day for 5 days. How many sit-ups will Phil do on the fifth day?

Days					
Sit-ups					

**Test Prep** Circle the correct letter for each correct answer.

Yolanda runs 4 miles a day to stay in shape. Read the table and answer the questions below.

Days	1	2	3	?	5	6	7	8
Miles run	4	8	12	16	20	24	28	?

3. How many days will it take Yolanda to run 16 miles?
- A** 4 days  
**B** 5 days  
**C** 7 days  
**D** 8 days
4. How many miles will Yolanda run in eight days?
- F** 8 miles  
**G** 24 miles  
**H** 32 miles  
**J** 40 miles

Name \_\_\_\_\_

## Estimating Differences

Estimate by rounding to the nearest ten.

$$\begin{array}{r} 1. \quad 63 \longrightarrow 60 \\ - 32 \longrightarrow - 30 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 41 \\ - 18 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 39 \\ - 23 \\ \hline \end{array}$$

$$4. \quad 57 - 28 = \underline{\hspace{2cm}}$$

$$5. \quad 63 - 29 = \underline{\hspace{2cm}}$$

Estimate by rounding to the nearest hundred.

$$\begin{array}{r} 6. \quad 903 \\ - 660 \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 726 \\ - 301 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 921 \\ - 546 \\ \hline \end{array}$$

$$9. \quad 707 - 233 = \underline{\hspace{2cm}}$$

$$10. \quad 342 - 185 = \underline{\hspace{2cm}}$$

Estimate by using front-end estimation.

$$\begin{array}{r} 11. \quad 57 \\ - 32 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 91 \\ - 57 \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad 76 \\ - 32 \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad 82 \\ - 13 \\ \hline \end{array}$$

**Test Prep** Circle the correct letter for each answer.

- 15.** Jon weighs 104 pounds and Max weighs 69 pounds. About how many more pounds does Jon weigh than Max?

**A** 70 pounds  
**B** 20 pounds  
**C** 30 pounds  
**D** 50 pounds

- 16.** Cailey's father read a book that had 578 pages. Cailey read a book with 201 pages. About how many more pages did Dad read?

**F** 300 pages  
**G** 400 pages  
**H** 40 pages  
**J** 500 pages

Name \_\_\_\_\_

## Subtracting Greater Numbers

1. 
$$\begin{array}{r} 9,829 \\ - 2,431 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 3,245 \\ - 2,026 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 4,170 \\ - 500 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 5,916 \\ - 2,007 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 9,704 \\ - 243 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} \$64.00 \\ - 37.00 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} \$42.82 \\ - 17.18 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} \$6,359 \\ - 3,342 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 7,650 \\ - 5,365 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 1,671 \\ - 400 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 3,124 \\ - 1,482 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} \$81.46 \\ - 79.38 \\ \hline \end{array}$$

13. The Rosemont School collected \$1,346 to help plant trees in the park. They spent \$228 advertising their fund raising. How much money can they give the city? \_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

Amelia has been saving pennies all her life and has 8,182 pennies. Betty has also been saving pennies, but has only 5,356 pennies. Betty takes 500 of her pennies to the bank to exchange for bills.

14. Before going to the bank, how many more pennies does Amelia have than Betty?
- A** 2,726 pennies
  - B** 2,826 pennies
  - C** 2,824 pennies
  - D** none of the above

15. After Betty takes the 500 pennies to the bank, how many will she have left?
- F** 4,556 pennies
  - G** 4,856 pennies
  - H** 5,456 pennies
  - J** none of the above

Name \_\_\_\_\_

## Subtracting Across Zeros

Subtract. Estimate to be sure your answers make sense.

1. 
$$\begin{array}{r} 506 \\ - 137 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 903 \\ - 146 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 600 \\ - 235 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 809 \\ - 509 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 700 \\ - 463 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 803 \\ - 297 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 400 \\ - 88 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 307 \\ - 118 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 707 \\ - 103 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 403 \\ - 227 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 602 \\ - 73 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 500 \\ - 6 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 3,000 \\ - 1,836 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 7,000 \\ - 3,955 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 9,000 \\ - 3,739 \\ \hline \end{array}$$


16. 
$$\begin{array}{r} \$60.00 \\ - 34.96 \\ \hline \end{array}$$

17. Mental Math Find  $8,340 - 8,300$ . \_\_\_\_\_

18. Scout troop #489 sold 705 boxes of cookies and troop #377 sold 396 boxes.

How many more boxes of cookies did troop #489 sell? \_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.


19.  $501 - 394 =$  

**A** 103

**B** 105

**C** 107

**D** 109

20.  $7,015 - 4,866 =$  

**F** 2,149

**G** 2,141

**H** 2,249

**J** 2,239

Name \_\_\_\_\_

## Mental Math Strategies

|

Add or subtract mentally. Use breaking apart.

1.  $67 - 32 =$  \_\_\_\_\_      2.  $46 + 51 =$  \_\_\_\_\_      3.  $437 + 322 =$  \_\_\_\_\_

4.  $836 + 131 =$  \_\_\_\_\_      5.  $999 - 438 =$  \_\_\_\_\_

Add or subtract mentally. Use compensation.

6.  $369 + 498 =$  \_\_\_\_\_      7.  $292 + 505 =$  \_\_\_\_\_

8.  $83 - 47 =$  \_\_\_\_\_      9.  $749 - 332 =$  \_\_\_\_\_

10.  $381 + 499 =$  \_\_\_\_\_      11.  $734 - 321 =$  \_\_\_\_\_

12. Jon recorded 346 cars that passed the school on Tuesday, and 297 cars that passed the school on Wednesday. How many cars did he record for the two days?

\_\_\_\_\_

13. On Tuesday, 380 adults and 179 children went to the baseball game. How many people went to the baseball game altogether?

\_\_\_\_\_

14. **Math Reasoning** Rachel has collected 198 stamps. If she collects 300 stamps by the end of the school year, she will win a prize in the stamp contest. How many stamps does she have left to collect?

\_\_\_\_\_

**Test Prep** Circle the correct letter for the answer.

15. There are 530 students at East View School and 952 students at North School. How many more students go to North School than East View? Use the breaking apart method.

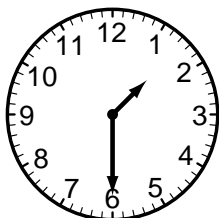
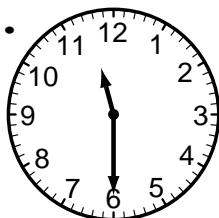
**A** 432 students    **B** 422 students    **C** 412 students    **D** 402 students

Name \_\_\_\_\_

## Elapsed Time

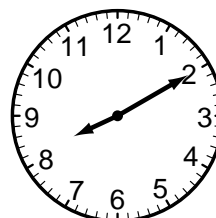
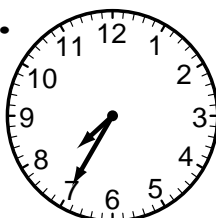
Look at each pair of times. Find how much time has passed.

1.



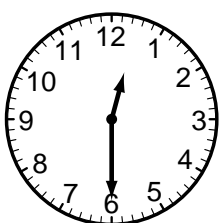
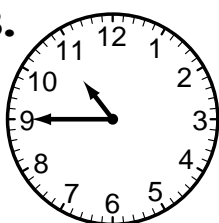
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2.



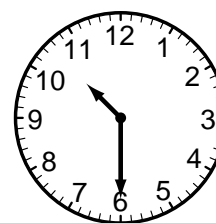
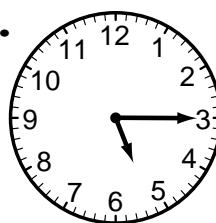
\_\_\_\_\_

3.



\_\_\_\_\_

4.



\_\_\_\_\_

Look at each pair of times. Find how much time has passed.

5. Start 1:20 P.M.  
End 3:20 P.M.

\_\_\_\_\_

6. Start 12:30 A.M.  
End 12:55 A.M.

\_\_\_\_\_

7. Start 4:55 P.M.  
End 5:15 P.M.

\_\_\_\_\_

Find what each time will be in 30 minutes.

8. 3:00 A.M.

\_\_\_\_\_

9. 4:45 P.M.

\_\_\_\_\_

10. 9:25 A.M.

\_\_\_\_\_

**Test Prep** Choose the correct letter for the answer.

11. Melissa begins her homework at 7:00 P.M. and works until 8:25 P.M.  
How long did she spend doing her homework?

- A 1 hour 10 minutes
- B 1 hour 14 minutes
- C 1 hour 20 minutes
- D 1 hour 25 minutes



Name \_\_\_\_\_

### **Problem-Solving Skill**

## **Exact Numbers or Estimates**

Circle the correct answer to each question.

Paula has been collecting postcards for more than 2 years. She has about 50 big postcards and at least 100 small postcards. Paula has 22 animal postcards. In all, Paula has postcards from 38 different places.

- |                                                                                                                                                         |                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>1.</b> How long has Paula been collecting postcards?<br><b>a.</b> less than 2 years<br><b>b.</b> exactly 2 years<br><b>c.</b> more than 2 years      | <b>2.</b> How many small postcards does Paula have?<br><b>a.</b> exactly 100<br><b>b.</b> less than 100<br><b>c.</b> 100 or more |
| <b>3.</b> Look back at the problem. Which number is an estimate?<br><b>a.</b> 2 years<br><b>b.</b> 22 animal postcards<br><b>c.</b> 38 different places | <b>4.</b> Which of these words tells you that 50 is an estimate?<br><b>a.</b> has<br><b>b.</b> about<br><b>c.</b> big            |

In Rockville, almost 200 people jogged in a footrace to support a trip to Washington for the 32 students in Mr. Blue's class. The trip costs \$58 a student. Joggers paid \$6 to be in the 3-mile race and got breakfast when they crossed the finish line.

- |                                                                                                                                             |                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>5.</b> Exactly how many people might have jogged in the footrace?<br><b>a.</b> 97 people<br><b>b.</b> 197 people<br><b>c.</b> 215 people | <b>6.</b> How long was the race?<br><b>a.</b> less than 3 miles<br><b>b.</b> exactly 3 miles<br><b>c.</b> more than 3 miles |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
- 7.** How much money did the race bring in? Does the class have enough money for the trip? Explain.
- \_\_\_\_\_

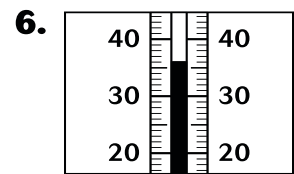
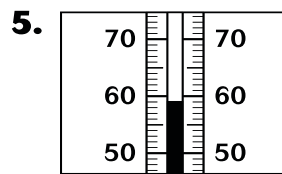
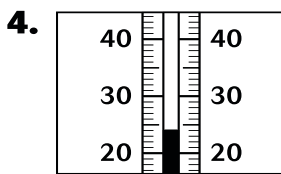
Name \_\_\_\_\_

## Temperature

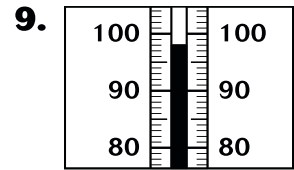
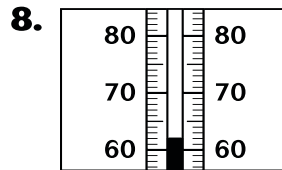
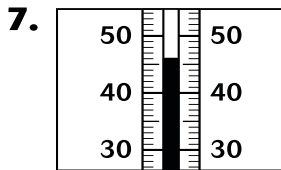
Circle the better estimate for the temperature.

1. a day to go swimming      2. bath water      3. ice cold lemonade  
35°C or 95°C      45°F or 85°F      5°C or 25°C

Write each Fahrenheit temperature.



Write each Celsius temperature.



10. **Math Reasoning** The third-grade class went for a nature hike. When they were deep in the shaded woods, their thermometer recorded 68°F. When they were in a prairie filled with sunlight, their thermometer recorded 81°F. How many degrees cooler was it in the shaded woods?
- \_\_\_\_\_

**Test Prep** Circle the correct letter for the answer.

11. The morning temperature was 45°F. The temperature rose 13° by afternoon and then dropped 15° by 8 P.M. What was the temperature at 8 P.M.?
- A** 43°F      **C** 44°F  
**B** 5°F      **D** 26°F

Name \_\_\_\_\_

## Relating Multiplication and Addition

Write an addition sentence and a multiplication sentence for each set of pictures.

1. 



\_\_\_ + \_\_\_ = \_\_\_

\_\_\_ × \_\_\_ = \_\_\_

2. 





\_\_\_ + \_\_\_ + \_\_\_ = \_\_\_

\_\_\_ × \_\_\_ = \_\_\_

Write a multiplication sentence for each addition sentence.

3.  $8 + 8 + 8 + 8$

\_\_\_ × \_\_\_ = \_\_\_

4.  $3 + 3 + 3 + 3 + 3 + 3$

\_\_\_ × \_\_\_ = \_\_\_

5.  $6 + 6 + 6$

\_\_\_ × \_\_\_ = \_\_\_

6.  $7 + 7 + 7 + 7$

\_\_\_ × \_\_\_ = \_\_\_

7. At the pet store there are 8 fish tanks. There are three fish in each tank. How many fish are there in the 8 tanks?

\_\_\_\_\_

8. If one tape costs \$3, how much do 5 tapes cost? \_\_\_\_\_

9. **Math Reasoning** Jon builds four tables with three legs each.

Sam builds three tables with four legs each. Did each boy use the same number of legs in building his tables? \_\_\_\_\_

**Test Prep** Circle the correct letter for the answer.

10. Mrs. Smith baked 3 apple pies. She used 9 apples in each pie. How many apples did she use altogether?

**A** 6 apples

**C** 18 apples

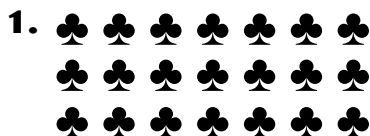
**B** 12 apples

**D** 27 apples

Name \_\_\_\_\_

## Using Arrays

Write a multiplication sentence for each array.



\_\_\_\_\_



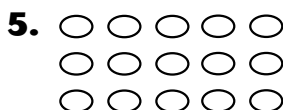
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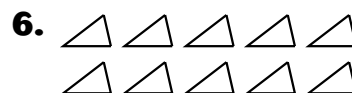
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

Draw an array for each multiplication expression. Then find the product.

7.  $3 \times 6 =$  \_\_\_\_\_

8.  $4 \times 7 =$  \_\_\_\_\_

9.  $5 \times 4 =$  \_\_\_\_\_

Write the number that belongs in each \_\_\_\_.

10.  $2 \times 7 = 14$ ,

so  $7 \times 2 =$  \_\_\_\_\_.

11.  $5 \times 4 = 20$ ,

so  $4 \times 5 =$  \_\_\_\_\_.

12.  $3 \times 8 = 24$ ,

so  $8 \times 3 =$  \_\_\_\_\_.

13.  $6 \times 8 = 48$ ,

so \_\_\_\_\_  $\times 6 = 48$ .

14.  $9 \times 4 = 36$ ,

so  $4 \times$  \_\_\_\_\_  $= 36$ .

15.  $5 \times 7 = 35$ ,

so \_\_\_\_\_  $\times 5 = 35$ .

**Test Prep** Circle the correct letter for the answer.

16. Tommy buys a box of chocolate creams. There are 4 candies in each row. There are 10 rows. How many chocolate creams are in the box?

**A** 14 chocolate creams

**C** 40 chocolate creams

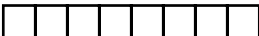
**B** 24 chocolate creams

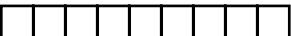
**D** 54 chocolate creams

Name \_\_\_\_\_

## Making Arrays

Write a multiplication sentence for each array.

1.  \_\_\_\_\_

2.  \_\_\_\_\_

3.  \_\_\_\_\_

4.  \_\_\_\_\_

Draw an array for each number sentence.

5.  $8 \times 1 = 8$

6.  $3 \times 6 = 18$

7.  $2 \times 5 = 10$

8.  $5 \times 4 = 20$

9. Which of the above answers is a square number? Tell how you know.

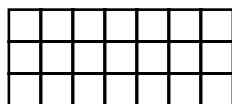
\_\_\_\_\_

10. Alan and Bryan designed a flag for their nature club. The flag was divided into 6 rows. Each row had six squares showing endangered animals. Do you think this flag was a square? \_\_\_\_\_ Explain your answer.

\_\_\_\_\_

**Test Prep** Circle the correct letter for the answer.

11. For this array, which multiplication sentence is correct?



**A**  $3 \times 5 = 15$

**B**  $3 \times 6 = 18$

**C**  $3 \times 7 = 21$

**D**  $3 \times 8 = 24$

Name \_\_\_\_\_

## Multiplying by 10

1.  $10 \times 1 =$  \_\_\_\_\_

2.  $3 \times 10 =$  \_\_\_\_\_

3.  $4 \times 10 =$  \_\_\_\_\_

4.  $10 \times 9 =$  \_\_\_\_\_

5.  $10 \times 2 =$  \_\_\_\_\_

6.  $6 \times 10 =$  \_\_\_\_\_

Write a multiplication sentence for each addition expression.

7.  $10 + 10 + 10$

8.  $10 + 10 + 10 + 10 + 10 + 10 + 10$

\_\_\_\_\_

\_\_\_\_\_

9.  $10 + 10 + 10 + 10 + 10$

10.  $10 + 10 + 10 + 10 + 10 + 10 + 10 + 10$

\_\_\_\_\_

\_\_\_\_\_

11. A decade is 10 years. If Ms. Mendoza is 5 decades old, how many years old is she?

\_\_\_\_\_

12. Hannah rides her bike 10 miles in one hour. She rides her bike 2 hours a day for 4 days. How many miles will she go in the 4 days?

\_\_\_\_\_

13. Mr. and Mrs. Pell and their 4 children took the train to visit some friends. The train tickets were \$10.00 each. What was the cost of the tickets?

\_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

14. Select a multiplication expression for this addition expression.

$10 + 10 + 10 + 10$

**A**  $4 \times 1$

**B**  $4 \times 4$

**C**  $10 \times 10$

**D**  $4 \times 10$

15. Select an addition expression for this multiplication expression.

$2 \times 10$

**F**  $2 + 2$

**G**  $10 + 2$

**H**  $10 + 10$

**J**  $10 + 10 + 10$

Name \_\_\_\_\_

## Missing Factors

Find each missing factor.

1.  $5 \times \underline{\hspace{2cm}} = 45$

2.  $6 \times \underline{\hspace{2cm}} = 48$

3.  $2 \times \underline{\hspace{2cm}} = 10$

4.  $\underline{\hspace{2cm}} \times 3 = 24$

5.  $9 \times \underline{\hspace{2cm}} = 54$

6.  $\underline{\hspace{2cm}} \times 10 = 60$

7.  $7 \times \underline{\hspace{2cm}} = 21$

8.  $9 \times \underline{\hspace{2cm}} = 36$

9.  $7 \times \underline{\hspace{2cm}} = 28$

10.  $\underline{\hspace{2cm}} \times 6 = 36$

11.  $4 \times \underline{\hspace{2cm}} = 32$

12.  $9 \times \underline{\hspace{2cm}} = 0$

Write a multiplication sentence to solve each problem.

13. The class did 15 science experiments during a 5-day week. They did the same number of experiments each day. How many experiments did they do each day?

14. If 27 new wheels were put on 9 airplanes, how many wheels went on each airplane?

15. **Math Reasoning** How do you know the missing factor in  $6 \times \blacksquare = 42$  is less than 8?

Find the missing factor and tell whether it is odd or even.

16.  $7 \times \blacksquare = 49$  \_\_\_\_\_

17.  $8 \times \blacksquare = 64$  \_\_\_\_\_

**Test Prep** Circle the correct letter for the answer.

18. Gary made a book of endangered animals. He knew about 80 animals but found only 63 pictures of these animals. He placed 9 endangered animals on each page. How many pages did he fill with pictures?

**A** 17 pages

**B** 7 pages

**C** 9 pages

**D** 24 pages

Name \_\_\_\_\_

## Problem-Solving Application

### Using a Pictograph

Use the pictograph below to answer Exercises 1–4.

**Our Rock Collections**

Student	Number of Rocks in Collection
Boris	○○○○○○○○○○
Devi	○○○
Kaitlin	○○○○○○○○
Ann	○○○○○○

Key: Each ○ stands for 5 rocks.

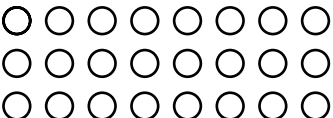
- Who has the greatest number of rocks? \_\_\_\_\_
- Who has the least number of rocks? \_\_\_\_\_
- Kaitlin has her rocks on a table.  
How many rocks are on the table? \_\_\_\_\_
- Who has collected half as many rocks as Kaitlin? \_\_\_\_\_
- Math Reasoning** Ann wants to show her rocks on another table.  
Will she have more, fewer, or the same number of rocks as Kaitlin?  
\_\_\_\_\_
- Boris puts 8 rocks on a small sheet of paper. How many sheets of paper  
does he need to display his rocks? Explain.  
\_\_\_\_\_



Name \_\_\_\_\_

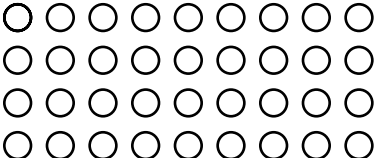
## Relating Multiplication and Division

Use the array to complete each sentence.

1. 

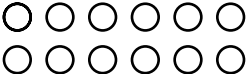
$$3 \times \underline{\quad} = 24$$

$$24 \div 3 = \underline{\quad}$$

2. 

$$\underline{\quad} \times 9 = 36$$

$$36 \div 4 = \underline{\quad}$$

3. 

$$2 \times 6 = \underline{\quad}$$

$$\underline{\quad} \div 2 = 6$$

Complete each number sentence.

4.  $9 \times \blacksquare = 18$  \_\_\_\_\_

$$18 \div 9 = \blacksquare$$
 \_\_\_\_\_

5.  $6 \times \blacksquare = 30$  \_\_\_\_\_

$$30 \div 6 = \blacksquare$$
 \_\_\_\_\_

6.  $8 \times \blacksquare = 8$  \_\_\_\_\_

$$8 \div 8 = \blacksquare$$
 \_\_\_\_\_

7.  $3 \times \blacksquare = 21$  \_\_\_\_\_

$$21 \div 3 = \blacksquare$$
 \_\_\_\_\_

8.  $4 \times \blacksquare = 28$  \_\_\_\_\_

$$28 \div 4 = \blacksquare$$
 \_\_\_\_\_

9.  $7 \times \blacksquare = 56$  \_\_\_\_\_

$$56 \div 7 = \blacksquare$$
 \_\_\_\_\_

10.  $5 \times \blacksquare = 25$  \_\_\_\_\_

$$25 \div 5 = \blacksquare$$
 \_\_\_\_\_

11.  $7 \times \blacksquare = 63$  \_\_\_\_\_

$$63 \div 7 = \blacksquare$$
 \_\_\_\_\_

12.  $8 \times \blacksquare = 24$  \_\_\_\_\_

$$24 \div 8 = \blacksquare$$
 \_\_\_\_\_

13. Jean had 28 roses. She put 4 in each vase. Write a division sentence to show how many vases there are. What multiplication fact did you use to help you divide? \_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

Max had 60 pennies and 4 nickels. He wants to change the pennies and nickels for dimes.

14. How many dimes will he have?

**A** 7 dimes

**B** 8 dimes

**C** 9 dimes

**D** 10 dimes

15. How much money does he have?

**F** 9 dimes

**G** 10 dimes

**H** 70 cents

**J** 80 cents

Name \_\_\_\_\_

## Dividing by 2

**Algebra** Find the missing factor. Use it to help you divide.

1.  $2 \times \underline{\quad} = 10$

$10 \div 2 = \underline{\quad}$

2.  $2 \times \underline{\quad} = 18$

$18 \div 2 = \underline{\quad}$

3.  $2 \times \underline{\quad} = 14$

$14 \div 2 = \underline{\quad}$

4.  $2 \times \underline{\quad} = 6$

$6 \div 2 = \underline{\quad}$

5.  $2 \times \underline{\quad} = 16$

$16 \div 2 = \underline{\quad}$

6.  $2 \times \underline{\quad} = 2$

$2 \div 2 = \underline{\quad}$

7.  $2 \times \underline{\quad} = 8$

$8 \div 2 = \underline{\quad}$

8.  $2 \times \underline{\quad} = 4$

$4 \div 2 = \underline{\quad}$

9.  $2 \times \underline{\quad} = 12$

$12 \div 2 = \underline{\quad}$

10.  $18 \div 2 = \underline{\quad}$

11.  $2 \div 2 = \underline{\quad}$

12.  $12 \div 2 = \underline{\quad}$

13.  $16 \div 2 = \underline{\quad}$

14.  $14 \div 2 = \underline{\quad}$

15.  $6 \div 2 = \underline{\quad}$

16.  $10 \div 2 = \underline{\quad}$

17.  $8 \div 2 = \underline{\quad}$

18.  $4 \div 2 = \underline{\quad}$

19. Mario has 16 chicks in a box. He takes half the chicks to the learning center. How many chicks does Mario have left?

\_\_\_\_\_

20. Alice shares 12 ribbons with Helen. If Alice shares the ribbons equally, how many will each girl get?

\_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

There are 18 children who are twins. There are 6 sets of twin boys. The rest of the twins are girls.

21. How many sets of twins are there?

**A** 7 sets

**C** 9 sets

**B** 8 sets

**D** 10 sets

22. How many sets of twin girls are there?

**F** 3 sets

**H** 5 sets

**G** 4 sets

**J** 6 sets

Name \_\_\_\_\_

## Dividing by 4

**Algebra** Find the missing factor. Use it to help you divide.

1.  $4 \times \underline{\quad} = 32$

$32 \div 4 = \underline{\quad}$

2.  $4 \times \underline{\quad} = 12$

$12 \div 4 = \underline{\quad}$

3.  $4 \times \underline{\quad} = 36$

$36 \div 4 = \underline{\quad}$

4.  $4 \times \underline{\quad} = 24$

$24 \div 4 = \underline{\quad}$

5.  $4 \times \underline{\quad} = 20$

$20 \div 4 = \underline{\quad}$

6.  $4 \times \underline{\quad} = 4$

$4 \div 4 = \underline{\quad}$

7.  $4 \overline{)28}$

8.  $4 \overline{)4}$

9.  $4 \overline{)16}$

10.  $4 \overline{)24}$

11.  $16 \div 4 = \underline{\quad}$

12.  $8 \div 4 = \underline{\quad}$

13.  $12 \div 4 = \underline{\quad}$

14.  $24 \div 4 = \underline{\quad}$

15.  $32 \div 4 = \underline{\quad}$

16.  $28 \div 4 = \underline{\quad}$

17. There are 4 hot-dog buns in a package. If the hot-dog vendor needs 12 buns, how many packages should he buy?
- \_\_\_\_\_

18. **Math Reasoning** Suppose the hot-dog vendor sold 36 hot-dogs for lunch. How many packages of hot-dog buns did he need to buy?

**Test Prep** Circle the correct letter for each answer.

At the butcher shop there were 32 chicken legs in packages of 4. During the day, the butcher sold 5 packages.

19. How many packages of chicken legs did the butcher have for sale?

**A** 3 packages  
**B** 4 packages  
**C** 7 packages  
**D** 8 packages

20. How many chicken legs did the butcher not sell by the end of the day?

**F** 8 legs  
**G** 12 legs  
**H** 16 legs  
**J** 20 legs

Name \_\_\_\_\_

## Dividing by 5

**Algebra** Find the missing factor. Use it to help you divide.

1.  $5 \times \underline{\quad} = 30$

$30 \div 5 = \underline{\quad}$

2.  $5 \times \underline{\quad} = 15$

$15 \div 5 = \underline{\quad}$

3.  $5 \times \underline{\quad} = 45$

$45 \div 5 = \underline{\quad}$

4.  $10 \div 5 = \underline{\quad}$

5.  $25 \div 5 = \underline{\quad}$

6.  $35 \div 5 = \underline{\quad}$

7.  $5 \div 5 = \underline{\quad}$

8.  $15 \div 5 = \underline{\quad}$

9.  $20 \div 5 = \underline{\quad}$

10.  $5 \overline{)40}$

11.  $5 \overline{)35}$

12.  $5 \overline{)15}$

13.  $5 \overline{)45}$

Complete each table.

Rule: Divide by 2.

14.

Input	Output
18	
12	
8	
16	

Rule: Divide by 3.

15.

Input	Output
12	
9	
15	
27	

Rule: Divide by 5.

16.

Input	Output
	3
10	
25	
45	

17. **Math Reasoning** In Ms. Perez's class, students receive stars for good work. Green stars are worth 10 points and red stars are worth 5 points. On Tuesday she gave students 45 points. If she gave out 3 red stars, how many students received a green star worth 10 points?
- \_\_\_\_\_

**Test Prep** Circle the correct letter for the answer.

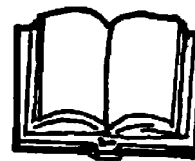
18. 30 students sit at 5 lunch tables every day. How many students are at one table, if the same number of students sit at each table?

**A** 25 students      **B** 8 students      **C** 6 students      **D** 4 students

Name \_\_\_\_\_

### **Problem-Solving Strategy**

## **Write a Number Sentence**



Write a number sentence to solve each problem.

- 1.** Angie puts books on shelves for a book fair. She puts 8 books on each shelf. She fills 4 shelves with books. How many books does Angie put on the shelves?  
\_\_\_\_\_
- 2.** Angie puts books in cartons. She has 24 books and 4 cartons. Each carton holds the same amount. How many books does she put in each carton?  
\_\_\_\_\_
- 3.** Angie's school sells 60 animal books and 19 puzzle books. How many more animal books than puzzle books are sold?  
\_\_\_\_\_
- 4.** Angie collects \$15 in all for 5 books. The cost of each book is the same. How much does each book cost?  
\_\_\_\_\_
- 5.** Soni buys a book with 32 pages. Raul buys a book with 15 more pages than Soni's. How many pages does Raul's book have?  
\_\_\_\_\_
- 6.** There are 21 students waiting in line to buy a book. There are 3 clerks collecting money. Each clerk helps the same number of students. How many students does each clerk help?  
\_\_\_\_\_
- 7.** Book covers are on sale for \$2. Rich buys 9 covers. How much does Rich pay?  
\_\_\_\_\_
- 8.** Carrie buys a book for \$8. Mia buys one for \$9. How much was their total bill?  
\_\_\_\_\_

Name \_\_\_\_\_

## **Problem-Solving Application**

### **Using Money**

1. The softball team at Wootton School is playing in the finals. Tickets cost \$3 each. How much will it cost for 6 tickets? \_\_\_\_\_
2. Bailey, his 2 brothers, and his parents bought tickets to the game. How much change will he receive from a \$20 bill? \_\_\_\_\_
3. At the team spirit booth, T-shirts are sold for \$8 and sweatshirts are sold for \$12. How much more will it cost for a family of four to buy sweatshirts than T-shirts? \_\_\_\_\_
4. Gigi buys two visors for \$3 each and a team banner for \$2. How much change will she get from \$10? \_\_\_\_\_
5. A team tote bag costs \$5. How many tote bags can Jon buy for \$20? \_\_\_\_\_
6. Mr. Fuentes has \$20 to spend. He buys a tote bag for \$5, and would like to buy as many visors as he can at \$3 each. How many visors can Mr. Fuentes buy? \_\_\_\_\_
7. Ivan spends \$18 on 6 team cups. If each one costs the same amount, how much does each team cup cost? \_\_\_\_\_
8. Baseball caps are on sale for \$8 each. Raul buys 4 caps and pays with a \$50 bill. How much money does he receive in change? \_\_\_\_\_
9. Roy buys 5 banners for \$15. Kim says she bought 6 banners that sold at 2 banners for \$4. Who spent less for each banner? Explain.  
  
\_\_\_\_\_

Name \_\_\_\_\_

## Dividing by 8

**Algebra** Find each missing factor. Use it to help you divide.

1.  $8 \times \underline{\quad} = 56$

2.  $8 \times \underline{\quad} = 32$

3.  $8 \times \underline{\quad} = 8$

$56 \div 8 = \underline{\quad}$

$32 \div 8 = \underline{\quad}$

$8 \div 8 = \underline{\quad}$

4.  $8 \overline{)16}$

5.  $8 \overline{)72}$

6.  $8 \overline{)24}$

7.  $8 \overline{)56}$

8.  $8 \overline{)8}$

9.  $8 \overline{)32}$

10.  $8 \overline{)0}$

11.  $8 \overline{)40}$

12.  $8 \overline{)64}$

13.  $8 \overline{)48}$

14.  $64 \div 8 = \underline{\quad}$

15.  $32 \div 8 = \underline{\quad}$

16.  $16 \div 8 = \underline{\quad}$

17.  $72 \div 8 = \underline{\quad}$

18.  $48 \div 8 = \underline{\quad}$

19.  $40 \div 8 = \underline{\quad}$

Write  $\times$  or  $\div$  for each .

20.  $24 \text{  } 8 = 3$

21.  $8 \text{  } 8 = 1$

22.  $8 \text{  } 6 = 48$

23. Nancy and Betty go to the octopus tank at the city aquarium. They know that each octopus has 8 legs. They count 56 octopus legs. How many octopuses are in the tank?
- \_\_\_\_\_

24. Tess plays a video game and she earns 72 points. For every 8 points, she receives a prize. How many prizes has she won so far?
- \_\_\_\_\_

**Test Prep** Circle the correct letter for the answer.

At Rob's birthday party pizza was served. There were 48 pieces of pizza. Each pizza was divided into 8 pieces.

25. How many pizzas were ordered?

- A 3 pizzas
- B 4 pizzas
- C 5 pizzas
- D 6 pizzas

Name \_\_\_\_\_

## Finding Missing Numbers

**Algebra** Find each missing number.

- |                                                   |                                                  |                                                   |
|---------------------------------------------------|--------------------------------------------------|---------------------------------------------------|
| <b>1.</b> $35 \div \underline{\hspace{1cm}} = 7$  | <b>2.</b> $\underline{\hspace{1cm}} \div 4 = 2$  | <b>3.</b> $64 \div \underline{\hspace{1cm}} = 8$  |
| <b>4.</b> $21 \div \underline{\hspace{1cm}} = 7$  | <b>5.</b> $\underline{\hspace{1cm}} \div 5 = 9$  | <b>6.</b> $\underline{\hspace{1cm}} \div 6 = 8$   |
| <b>7.</b> $10 \div \underline{\hspace{1cm}} = 10$ | <b>8.</b> $72 \div 9 = \underline{\hspace{1cm}}$ | <b>9.</b> $16 \div \underline{\hspace{1cm}} = 4$  |
| <b>10.</b> $\underline{\hspace{1cm}} \div 8 = 3$  | <b>11.</b> $5 \div \underline{\hspace{1cm}} = 5$ | <b>12.</b> $\underline{\hspace{1cm}} \div 2 = 7$  |
| <b>13.</b> $25 \div \underline{\hspace{1cm}} = 5$ | <b>14.</b> $7 \div \underline{\hspace{1cm}} = 7$ | <b>15.</b> $54 \div \underline{\hspace{1cm}} = 9$ |
| <b>16.</b> $63 \div \underline{\hspace{1cm}} = 7$ | <b>17.</b> $\underline{\hspace{1cm}} \div 9 = 3$ | <b>18.</b> $32 \div \underline{\hspace{1cm}} = 4$ |

**Algebra** Write a division sentence to solve each exercise.

- 19.** The students in Mrs. Jacob's room were in groups of 3. There were 3 groups of boys and 4 groups of girls. How many students were in Mrs. Jacob's class?
- \_\_\_\_\_

- 20.** Jorge and Vic save stamps from South America. They have divided their stamps equally among 4 pages of an album. There are 9 stamps on each page. How many stamps do they have?
- \_\_\_\_\_

- 21.** A group of third-grade students went to the zoo. Each parent was in charge of 5 students. If there were 7 parents, how many students were there?
- \_\_\_\_\_

**Test Prep** Circle the correct letter for the answer.

- 22.** Sal delivered newspapers every day of the week. He delivered 45 papers each weekday and 60 papers on Sunday. Each week he earned \$21. How much did Sal earn each day? Which number sentence would you use to solve the problem?

**A**  $45 + 60$       **B**  $\$21 \times 5$       **C**  $\$21 - 7$       **D**  $\$21 \div 7$

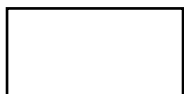


Name \_\_\_\_\_

## Plane Figures

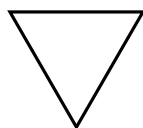
Name each figure.

1.



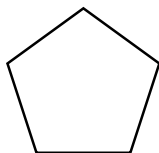
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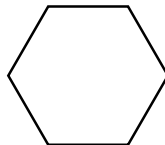
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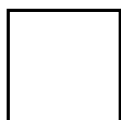
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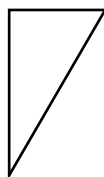
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5.



\_\_\_\_\_

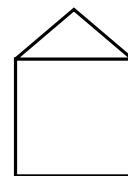
6.



\_\_\_\_\_

7. Look at the figure at the right. Which shapes do you see?

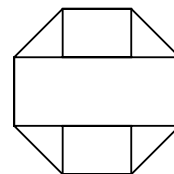
\_\_\_\_\_



8. In the figure at the right, which shapes do you see?

\_\_\_\_\_

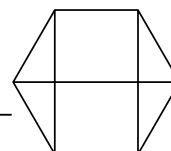
\_\_\_\_\_



9. In the figure at the right, which shapes do you see?

\_\_\_\_\_

\_\_\_\_\_



Name \_\_\_\_\_

## Mental Math: Multiplication Patterns

Use basic facts and patterns to find each product.

1.  $3 \times 5 =$  \_\_\_\_\_

2.  $6 \times 9 =$  \_\_\_\_\_

3.  $2 \times 5 =$  \_\_\_\_\_

$3 \times 50 =$  \_\_\_\_\_

$6 \times 90 =$  \_\_\_\_\_

$2 \times 50 =$  \_\_\_\_\_

$3 \times 500 =$  \_\_\_\_\_

$6 \times 900 =$  \_\_\_\_\_

$2 \times 500 =$  \_\_\_\_\_

4.  $7 \times 3 =$  \_\_\_\_\_

5.  $1 \times 8 =$  \_\_\_\_\_

6.  $5 \times 6 =$  \_\_\_\_\_

$7 \times 30 =$  \_\_\_\_\_

$1 \times 80 =$  \_\_\_\_\_

$5 \times 60 =$  \_\_\_\_\_

$7 \times 300 =$  \_\_\_\_\_

$1 \times 800 =$  \_\_\_\_\_

$5 \times 600 =$  \_\_\_\_\_

**Mental Math** Use mental math to find each product.

7.  $8 \times 70 =$  \_\_\_\_\_

8.  $6 \times 600 =$  \_\_\_\_\_

9.  $2 \times 90 =$  \_\_\_\_\_

10.  $7 \times 70 =$  \_\_\_\_\_

11.  $2 \times 50 =$  \_\_\_\_\_

12.  $4 \times 100 =$  \_\_\_\_\_

13. **Math Reasoning** Mick can run 15 feet in 4 seconds. How many feet can he run in 40 seconds? \_\_\_\_\_

14. Margo reads 40 pages in her mystery book each night. The book has 130 pages. Will she finish the book in three nights? Explain your answer.

\_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

Jimmy rode his bike for 40 minutes each day for 6 days. Terry rode his bike 30 minutes each day for 9 days.

15. How many minutes did Jimmy ride his bike?

**A** 24 minutes

**B** 240 minutes

**C** 270 minutes

**D** 2,400 minutes

16. How many minutes altogether did the boys ride?

**F** 410 minutes

**G** 480 minutes

**H** 510 minutes

**J** 580 minutes

Name \_\_\_\_\_

## Multiplying Two-Digit Numbers

1. 
$$\begin{array}{r} 25 \\ \times 7 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 86 \\ \times 4 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 34 \\ \times 8 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 22 \\ \times 6 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 43 \\ \times 5 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 17 \\ \times 8 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 52 \\ \times 5 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 64 \\ \times 3 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 98 \\ \times 2 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 95 \\ \times 2 \\ \hline \end{array}$$

11. There are 3 school buses. Each bus carries 65 passengers. How many passengers do the 3 buses carry when they are all filled?

\_\_\_\_\_

**Algebra** Multiply in any order.

12.  $3 \times 6 \times 2 =$  \_\_\_\_\_ 13.  $4 \times 5 \times 2 =$  \_\_\_\_\_ 14.  $8 \times 2 \times 7 =$  \_\_\_\_\_

15. **Math Reasoning** Look at Exercise 13 above. Tell how you could multiply the three numbers using mental math.

\_\_\_\_\_  
\_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

Jack and Ella count 28 windows on one side of a passenger aircraft. There are 6 of the same type of aircraft at the airport.

16. How many windows are there in 1 aircraft?

**A** 28 windows  
**B** 54 windows  
**C** 56 windows  
**D** 64 windows

17. How many windows are there in the 6 aircraft?

**F** 296 windows  
**G** 316 windows  
**H** 328 windows  
**J** 336 windows

Name \_\_\_\_\_

## Multiplying Three-Digit Numbers

1. 
$$\begin{array}{r} 312 \\ \times 5 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 572 \\ \times 2 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 276 \\ \times 4 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 371 \\ \times 5 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 424 \\ \times 3 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 617 \\ \times 5 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} \$1.31 \\ \times 8 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} \$2.65 \\ \times 2 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 193 \\ \times 3 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 481 \\ \times 3 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 342 \\ \times 5 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} \$2.83 \\ \times 3 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} 412 \\ \times 8 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 260 \\ \times 3 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 649 \\ \times 2 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} \$3.52 \\ \times 4 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} \$3.19 \\ \times 7 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} \$5.14 \\ \times 3 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} \$8.29 \\ \times 6 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} \$5.78 \\ \times 9 \\ \hline \end{array}$$

21.  $459 \times 4$

22.  $\$6.32 \times 8$

23.  $147 \times 5$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

24. 675 people arrive at the ballpark each hour. If that rate continues, how many people will be at the ballpark at the end of 3 hours?

\_\_\_\_\_

**Test Prep** Circle the correct letter for the answer.

25. Romelia receives \$8.75 a week for selling newspapers. How much will she earn in 7 weeks?

**A** \$58.25

**B** \$60.25

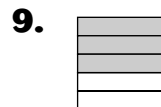
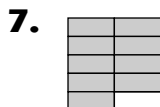
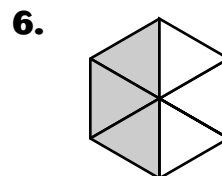
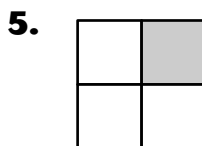
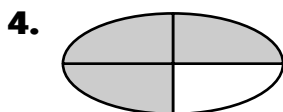
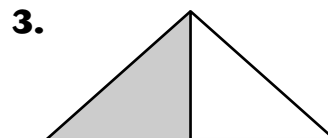
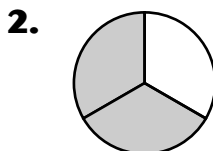
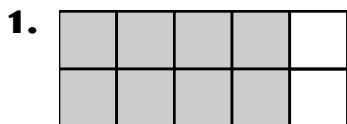
**C** \$61.25

**D** \$61.15

Name \_\_\_\_\_

## Fractions as Parts of a Whole

Write a fraction for the shaded part.



10. Jill made lasagna and cut it into 5 equal pieces. She ate 2 pieces.  
Draw a picture and write a fraction to show how much lasagna is left.
- \_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

Suzy was given a circle of tagboard to make a Native American war shield. She divided it into 9 parts and colored 5 of the parts. In the other four parts she drew pictures of animals the warriors would hunt.

11. What fraction of the war shield was colored?

**A**  $\frac{9}{9}$

**C**  $\frac{6}{9}$

**B**  $\frac{5}{9}$

**D** none of the above

12. What part of the war shield was decorated with animals?

**F**  $\frac{9}{9}$

**H**  $\frac{6}{9}$

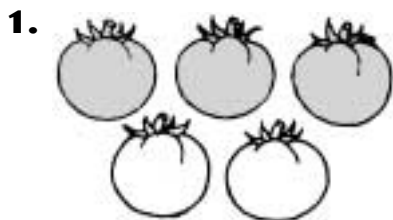
**G**  $\frac{4}{9}$

**J** none of the above

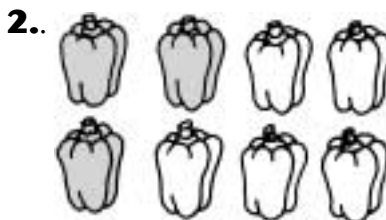
Name \_\_\_\_\_

## Fractions as Parts of a Set

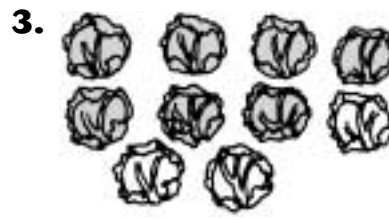
Write a fraction that names the part of each set that is shaded.



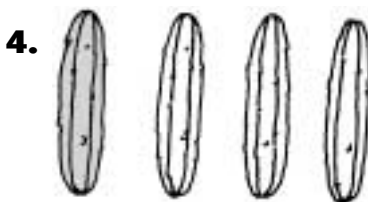
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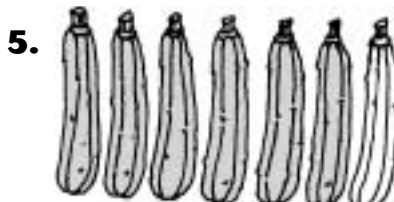
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

7. Maria picks 10 peapods at the "Pick Your Own" farm. She eats 7 of them. What fraction of the peapods does Maria eat?

\_\_\_\_\_

8. Sal makes a batch of 12 muffins. She eats 2 a day. What fraction of the muffins are left after 3 days?

\_\_\_\_\_

9. Eli's team played 8 baseball games. They won 6 of the games. What fraction of the games did they lose?

\_\_\_\_\_

**Test Prep** Circle the correct letter for the answer.

10. Poncho had 5 marigold and 4 rose plants for sale. He sold 3 marigold plants and 2 rose plants. What fraction of all the plants did he **NOT** sell?

**A**  $\frac{3}{9}$  of the plants

**C**  $\frac{5}{9}$  of the plants

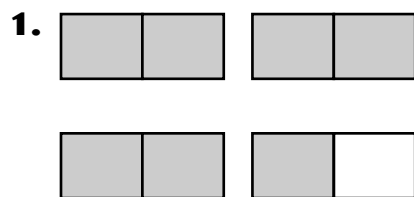
**B**  $\frac{4}{9}$  of the plants

**D**  $\frac{9}{6}$  of the plants

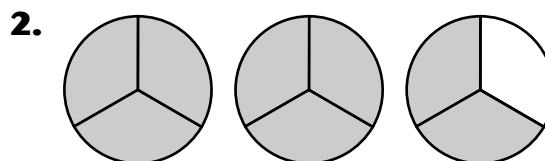
Name \_\_\_\_\_

## Understanding Mixed Numbers

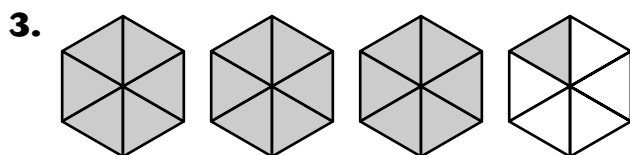
Write a mixed number for the part that is shaded.



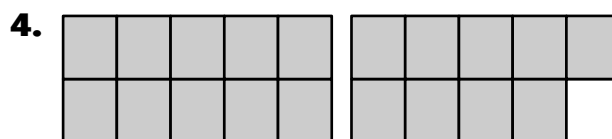
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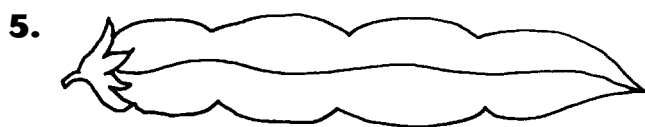


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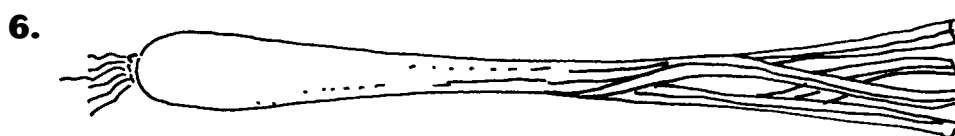


\_\_\_\_\_

Measure each object to the nearest quarter inch.



\_\_\_\_\_



\_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

Mrs. Garcia is baking cupcakes. She has 3 cupcake pans, and in each pan there are 12 sections for batter. She poured the batter into 30 sections.

7. What mixed number tells how many pans have been filled with batter?

**A**  $1\frac{6}{12}$

**B**  $1\frac{3}{12}$

**C**  $2\frac{6}{12}$

**D**  $2\frac{3}{12}$

8. What fraction of the sections still needs to be filled?

**F**  $\frac{3}{36}$

**G**  $\frac{6}{36}$

**H**  $\frac{8}{36}$

**J**  $\frac{10}{36}$

Name \_\_\_\_\_

## Organizing Data

Use the information to the right to answer Exercises 1–3.

1. Make a tally chart to record the information.

Birds	Votes

Our Favorite Birds	
Annie	bluebird
Phil	hawk
Sarah	eagle
Jim	hawk
Chloe	eagle
Ed	bluebird
Luis	hawk
Ming	bluebird
Reyna	robin
Tess	eagle
Ben	hawk

2. What do the tallies in your chart tell you about the class' favorite birds?

---

---

3. **Math Reasoning** In another class, 3 times as many students selected the hawk and 2 times as many students selected the eagle. No one selected the bluebird or robin as their favorite bird. How many students were in the other class?

---

**Test Prep** Circle the correct letter for the answer.

4. Study the tally chart. How many books did both grades read altogether?

Books Read	
Grade	Number of books
Second Graders	
Third Graders	

- A** 34 books    **B** 40 books    **C** 44 books    **D** 54 books

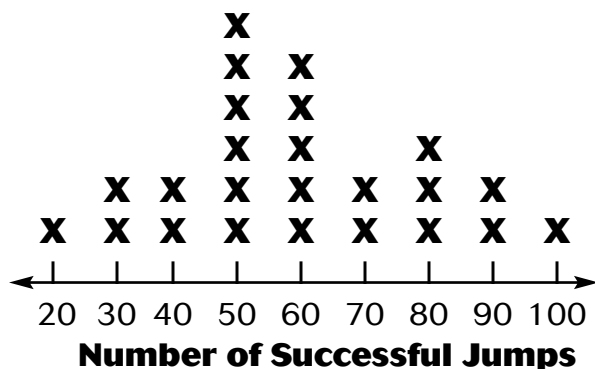


Name \_\_\_\_\_

## Line Plots

Use the line plot below to answer Exercises 1–4.

The students in Ms. May's classroom had a contest to see who could jump rope longest without tripping. They made a line plot to record their data.



1. What was the most common number of successful jumps?

\_\_\_\_\_

2. How many jumps does the student with the best record have?

\_\_\_\_\_

3. Does the data for jumping form any clusters?

\_\_\_\_\_

4. How many students were able to jump 70 or more times?

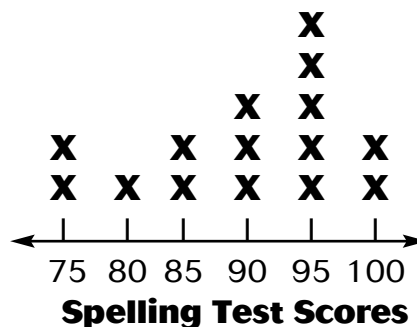
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**Test Prep** Circle the correct letter for the answer.

On a spelling test everyone had a passing score. The students' scores were placed on a line plot.

5. How many students had the highest score?

- A** 3 students
- B** 4 students
- C** 2 students
- D** 5 students



Name \_\_\_\_\_

## Problem-Solving Strategy

### Make a Graph

Judy's school has a small farm. Students volunteer time to help run it. Judy made this tally chart to record the number of animals that students were taking care of on the farm.

Animals	Number
cats	
dogs	
cows	
horses	

1. Use the chart to make a bar graph to organize this data.

**Number of Animals on the Farm**

	1	2	3	4	5	6	7	8	9	10	11	12	13
Animals													
cats													
dogs													
cows													
horses													

2. Which animal is the greatest in number? the least?

\_\_\_\_\_

3. How many more cats are there than dogs?

\_\_\_\_\_

4. How many more cows does the school need in order to have 20 cows?

\_\_\_\_\_

5. How many animals are there altogether on the farm?

\_\_\_\_\_

Name \_\_\_\_\_

## Displaying Probability Data and Making Predictions

Use the bar graph at the right for Exercises 1–3.

1. What does each bar on the graph show?

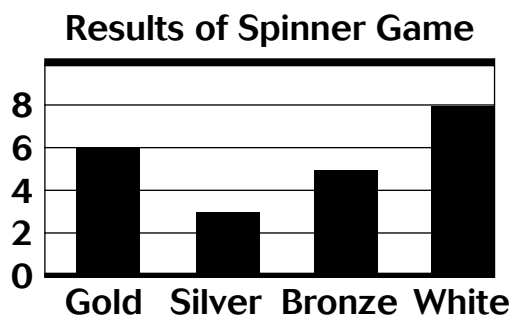
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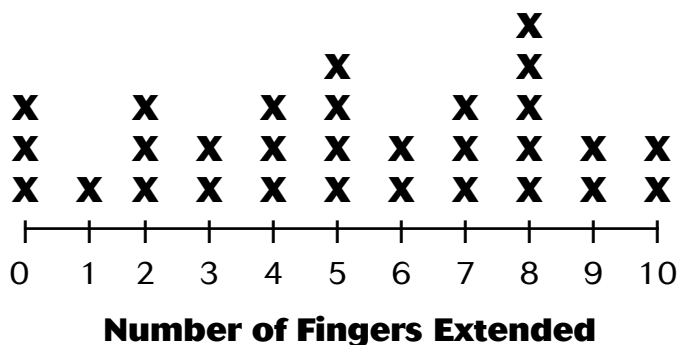
2. Which color did the spinner stop on most often? \_\_\_\_\_

3. If you repeat this game, predict which color you think the spinner will land on least often. \_\_\_\_\_



Use the line plot at the right for Exercises 4–6.

Two students played a game. On the count of three, each student showed 0-5 fingers extended in an open position and the others closed in a curled position. They then added the number of open fingers. They recorded their results on a line plot.



4. What sum of opened fingers did they most frequently get? \_\_\_\_\_
5. What sum of opened fingers did they least frequently get? \_\_\_\_\_
6. If two other students played the game, predict the sum they would most frequently get. \_\_\_\_\_

**Test Prep** Circle the correct letter for the answer.

7. If two students played the fingers game 90 times instead of 30, predict the total number of times they would get a sum of 6.

**A** 2                      **B** 4                      **C** 6                      **D** 8

Name \_\_\_\_\_

## Place Value Through Millions

Write the value of the underlined digit.

1. 2,461,478

\_\_\_\_\_

2. 4,389,265

\_\_\_\_\_

3. 23,098,149

\_\_\_\_\_

4. 380,456,312

\_\_\_\_\_

5. 25,000,133

\_\_\_\_\_

6. 89,354,188

\_\_\_\_\_

Write each number in standard form using commas.

7. Four million, one hundred thousand \_\_\_\_\_

8. 50,000,000 + 3,000,000 + 400 \_\_\_\_\_

9. 400,000,000 + 10,000,000 + 8,000 \_\_\_\_\_

Write the number in word form and short word form.

10. 106,002,433

\_\_\_\_\_

\_\_\_\_\_

**Test Prep** Circle the correct letter for the answer.

11. During a single year, one million, nine hundred thirty-three thousand, five hundred five people attended baseball games in the Houston Astrodome. Which answer shows this number written in expanded form?

**A** 1,193,355

**B** 1,000,000 + 900,000 + 30,000 + 3,000 + 500 + 5

**C** 1,000,000 + 900,000 + 3,000 + 500 + 5

**D** 1 million, 993 thousand, 505

Name \_\_\_\_\_

## Rounding Numbers

Round each number to the nearest ten.

**1.** 16,326

\_\_\_\_\_

**2.** 412,825

\_\_\_\_\_

**3.** 6,512,162

\_\_\_\_\_

**4.** 42,084,097

\_\_\_\_\_

Round each number to the nearest hundred.

**5.** 1,427

\_\_\_\_\_

**6.** 68,136

\_\_\_\_\_

**7.** 271,308

\_\_\_\_\_

**8.** 7,593,656

\_\_\_\_\_

Round each number to the nearest thousand.

**9.** 18,366

\_\_\_\_\_

**10.** 409,614

\_\_\_\_\_

**11.** 48,229,930

\_\_\_\_\_

**12.** 694,563,239

\_\_\_\_\_

Round each number to the underlined place.

**13.** 12,108

\_\_\_\_\_

**14.** 570,274

\_\_\_\_\_

**15.** 9,333,625

\_\_\_\_\_

**16.** 534,307,164

\_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

**17.** What is 681,542 rounded to the nearest hundred thousand?

**A** 600,000

**C** 700,000

**B** 680,000

**D** 780,000

**18.** What is 24,850,011 rounded to the nearest million?

**F** 25,000,000

**H** 24,800,000

**G** 24,000,000

**J** 25,800,000

Name \_\_\_\_\_

## Estimating Sums and Differences

Estimate each sum or difference.

1. 
$$\begin{array}{r} 48 \\ + 33 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 42 \\ + 47 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 76 \\ - 53 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} \$4.37 \\ + \$4.73 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 876 \\ - 313 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 74 \\ - 57 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 58 \\ + 66 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 86 \\ + 43 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 722 \\ + 363 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 769 \\ - 525 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 619 \\ - 527 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 796 \\ + 327 \\ \hline \end{array}$$

13. 
$$\begin{array}{r} \$8.62 \\ - \$5.18 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} \$6.32 \\ + \$2.23 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} \$7.75 \\ - \$6.15 \\ \hline \end{array}$$

16. Lara and Mickey went bowling. Lara scored 199 points and Mickey scored 151 points. Estimate how many points they scored altogether.

\_\_\_\_\_

17. If Mickey and Lara each buy a bowling ball on sale for \$39.95, estimate how much they will spend altogether.

\_\_\_\_\_

18. **Math Reasoning** If you have \$20 to spend but need \$2.50 for the bus ride home, estimate the most you can spend.

\_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

19. Three people played a game. Their scores were 34, 52, and 68. Estimate the total number of points scored in the game.

**A** 130

**B** 140

**C** 150

**D** 160

20. Two people playing a game together scored 104. If Alex scored 68 points, estimate how many points Sally scored.

**F** 30

**G** 40

**H** 50

**J** 60

Name \_\_\_\_\_

## Adding Greater Numbers

<b>1.</b> $\begin{array}{r} 33,151 \\ + 16,516 \\ \hline \end{array}$	<b>2.</b> $\begin{array}{r} 69,051 \\ + 36,745 \\ \hline \end{array}$	<b>3.</b> $\begin{array}{r} 694 \\ 8,699 \\ 4,528 \\ + 6,710 \\ \hline \end{array}$	<b>4.</b> $\begin{array}{r} 4,653 \\ 6,570 \\ 7,709 \\ + 5,554 \\ \hline \end{array}$	<b>5.</b> $\begin{array}{r} 10,976 \\ 5,666 \\ 924 \\ + 21,776 \\ \hline \end{array}$
-----------------------------------------------------------------------	-----------------------------------------------------------------------	-------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------

<b>6.</b> $\begin{array}{r} 99,825 \\ + 68,590 \\ \hline \end{array}$	<b>7.</b> $\begin{array}{r} 37,709 \\ 44,557 \\ + 4,964 \\ \hline \end{array}$	<b>8.</b> $\begin{array}{r} \$959.42 \\ \$773.62 \\ + \$799.91 \\ \hline \end{array}$	<b>9.</b> $\begin{array}{r} 51,101 \\ 25,114 \\ 3,459 \\ + 33,143 \\ \hline \end{array}$	<b>10.</b> $\begin{array}{r} 74,592 \\ 7,904 \\ 919 \\ + 25,971 \\ \hline \end{array}$
-----------------------------------------------------------------------	--------------------------------------------------------------------------------	---------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------

**11.**  $2,390 + 20,766 + 62,727$

\_\_\_\_\_

**12.**  $28,713 + 30,407 + 26,020 + 8,727$

\_\_\_\_\_

Use the table to answer Exercises 13 – 14.

**13.** What was the total number of seeds Ruben sold for weeks 3 and 4? \_\_\_\_\_

Was this number higher than the total for weeks 1 and 2?

\_\_\_\_\_

**14.** Estimate how many thousand seeds Ruben sold in all 4 weeks? \_\_\_\_\_

Seeds Sold	
Week	Seeds
Week 1	34,941
Week 2	18,365
Week 3	26,162
Week 4	33,830

**Test Prep** Circle the correct letter for each answer.

The hardware store received four shipments of washers. The first shipment contained 10,090 washers. The second shipment contained 18,225 washers. The third shipment contained 22,659 washers, and the fourth shipment contained 15,787 washers.

**15.** How many washers did the hardware store receive in the largest and the smallest shipments combined?

**A** 32,749

**B** 28,315

**C** 38,446

**D** 34,012

**16.** What was the total number of washers received in the two largest shipments?

**F** 39,884

**G** 80,448

**H** 40,884

**J** 40,848

Name \_\_\_\_\_

## Subtracting Greater Numbers

1. 
$$\begin{array}{r} 9,039 \\ - 5,655 \\ \hline \end{array}$$
 2. 
$$\begin{array}{r} 76,263 \\ - 58,147 \\ \hline \end{array}$$
 3. 
$$\begin{array}{r} 24,632 \\ - 15,462 \\ \hline \end{array}$$
 4. 
$$\begin{array}{r} 78,069 \\ - 59,576 \\ \hline \end{array}$$
 5. 
$$\begin{array}{r} 66,076 \\ - 56,658 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 7,806 \\ - 6,915 \\ \hline \end{array}$$
 7. 
$$\begin{array}{r} 60,913 \\ - 59,064 \\ \hline \end{array}$$
 8. 
$$\begin{array}{r} 65,875 \\ - 57,996 \\ \hline \end{array}$$
 9. 
$$\begin{array}{r} 7,047 \\ - 6,068 \\ \hline \end{array}$$
 10. 
$$\begin{array}{r} 80,769 \\ - 60,987 \\ \hline \end{array}$$

11. Murphy has an article with 72,885 words and an article with 59,993 words. How many more words does the longer article have? \_\_\_\_\_

Use the table at the right for Exercises 12–15.

12. What was the combined word count in both of Laurel's articles?

\_\_\_\_\_

13. Did Laurel's articles have a higher total word count than Keenan's articles? If so, by how many words?

\_\_\_\_\_

Word Count	
Laurel	Keenan
Article 1 29,775	Article 1 31,978
Article 2 57,725	Article 2 49,376

14. How many more words are there in the longest of the articles than in the shortest of the articles? \_\_\_\_\_
15. What is the difference in word count between Laurel's shortest article and Keenan's shortest article? \_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

16. During hurricane season, the hardware stores on an island sold 18,447 candles. This was 2,479 more candles than they sold during the last hurricane season. How many candles did the stores sell last season?

**A** 20,926 candles   **B** 16,032 candles   **C** 15,968 candles   **D** 17,936 candles



Name \_\_\_\_\_

## Subtracting Across Zeros

1. 
$$\begin{array}{r} 900 \\ - 559 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 7,000 \\ - 3,875 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 5,000 \\ - 796 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 80,708 \\ - 53,837 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 6,000 \\ - 3,086 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 96,000 \\ - 75,846 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 70,004 \\ - 10,973 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 78,008 \\ - 34,566 \\ \hline \end{array}$$

9.  $5,000 - 3,066$   
\_\_\_\_\_

10.  $82,000 - 43,765$   
\_\_\_\_\_

11.  $70,053 - 9,589$   
\_\_\_\_\_

12. Patrick has filed 1,485 of 3,000 baseball cards. How many cards are left to be filed? \_\_\_\_\_

13. Elisabeth and Jeanne are covering a fireplace mantel with 4,500 fancy tacks. Elisabeth has added 934 tacks to the mantel. Jeanne has added 1,093 tacks. How many tacks do they have to add to complete the mantel?  
\_\_\_\_\_

14. Every week, each of Ms. Patel's 32 students and Ms. Munson's 28 students join 10 pieces to the puzzle they are working on. The puzzle has 7,000 pieces. After 5 weeks, how many pieces will be left? \_\_\_\_\_

**Test Prep** Circle the correct letter for the answer.

15. Brenda is sewing 3,000 sequins onto a skirt. She has already sewn 2,120 sequins. How many sequins are left to sew onto the skirt?

**A** 1,220

**B** 320

**C** 2,120

**D** 880

Name \_\_\_\_\_

## Problem-Solving Application

# Using a Pictograph
















Use the pictograph for Exercises 1–6.


1. How many sports posters does Jeri have?

\_\_\_\_\_

2. Does Jeri have more animal or travel posters?

\_\_\_\_\_

Jeri's Poster Collection	
Type	Number
Animals	   
Sports	  
Music Groups	
Travel	    
Movies	 

Each  = 6 posters

3. Jeri rolls up all of her movie and music group posters on one shelf and all of her animal posters on another. Which shelf has more posters? How many posters are on each shelf?

\_\_\_\_\_

4. List the types of posters in order from least to greatest.

\_\_\_\_\_

5. How many travel posters in all does Jeri own? \_\_\_\_\_

6. Suppose Jeri doubled the number of sports posters she owns. Draw the symbols you would use on this pictograph to show how many sports posters Jeri would then own.

\_\_\_\_\_

Name \_\_\_\_\_

### Problem-Solving Skill

## Multistep Problems

Sally wants to decorate her balcony with potted plants. She wants to buy 4 each of African violet and begonia plants. The cost of the plants is in the table below. How much would Sally have to pay for the plants?

1. What operations do you need to perform in order to solve the problem?

\_\_\_\_\_

2. Which operation should you perform first?

\_\_\_\_\_

Plant	Cost
Begonia	\$17
Jasmine	\$13
African violet	\$9

3. Write a number sentence that you could use to find the total cost for Sally to buy 4 jasmine plants.

\_\_\_\_\_

4. **Math Reasoning** Suppose Sally has only \$60 and wants to buy only African violets. What steps do you need to complete to find the greatest number of African violets that Sally could buy? Explain.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

5. At the nursery, there is a sale on red clay pots that cost \$5 each, and another sale on blue plastic pots that cost \$3 each. Ms. Sobol wants to buy 6 red clay pots and 8 blue plastic pots. What is her total cost?

\_\_\_\_\_

6. Mr. Roberts has \$40 and wants to buy the same number of red clay pots and blue plastic pots. How many of each can he buy?

\_\_\_\_\_

Name \_\_\_\_\_

## Multiplying Two- and Three-Digit Numbers

1. 
$$\begin{array}{r} 75 \\ \times 5 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 23 \\ \times 4 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 160 \\ \times 5 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 344 \\ \times 7 \\ \hline \end{array}$$

5.  $56 \times 7$

6.  $9 \times 27$

7.  $6 \times 264$

8.  $498 \times 6$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

9. Seven china-doll painters each painted 2 eyes on each of 22 doll faces a day. How many eyes in all did they paint in one day?

\_\_\_\_\_

10. Find the value of  $718 \times n$  when  $n = 4$ .

\_\_\_\_\_

11. **Mental Math** Explain how you would find  $8 \times 303$  mentally.

\_\_\_\_\_

\_\_\_\_\_

12. **Math Reasoning** Give an example of a two-digit number multiplied by a one-digit number that does not require regrouping to find the product.

\_\_\_\_\_

**Test Prep** Circle the correct letter for each answer. Use the information in the table to solve Exercises 13 and 14.

13. Mrs. Tovey's class wants to make 7 batches of modeling clay. How many milliliters of baking soda do they need?

**A** 540 ml

**C** 1,155 ml

**B** 875 ml

**D** 1,750 ml

Recipe for Modeling Clay	
Baking Soda	250 ml
Cornstarch	125 ml
Warm Water	165 ml

14. Each group of 4 students makes 1 batch of modeling clay. How many milliliters of cornstarch will 12 students use?

**F** 48 ml

**G** 375 ml

**H** 1,000 ml

**J** 1,500 ml

Name \_\_\_\_\_

## Problem-Solving Strategy

### Make a Table

Complete the table. Then use it to solve the problems.

Number of Teams	Number of Volleyball Players	Number of Lacrosse Players
1	6	10
2	12	20
3		
4		
5		
6		

- How many players are there on three volleyball and three lacrosse teams combined? \_\_\_\_\_
- Which equal number of volleyball and lacrosse teams results in a number divisible by 10? \_\_\_\_\_
- Math Reasoning** Why is making a table a good strategy to know?  
\_\_\_\_\_  
\_\_\_\_\_
- It costs \$8 for each T-shirt. They can be bought only in boxes of 3. If there are 16 players on the basketball team, how many shirts can they buy? How much money will the T-shirts cost altogether? \_\_\_\_\_
- Carmen spends 20 minutes more each week than the week before painting pictures. If she paints 40 minutes the first week, how long will she work the fifth week? \_\_\_\_\_

Name \_\_\_\_\_

## Multiplying Greater Numbers

1. 
$$\begin{array}{r} 2,143 \\ \times \quad 5 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 3,121 \\ \times \quad 4 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 11,256 \\ \times \quad 6 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 32,017 \\ \times \quad 7 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 5,502 \\ \times \quad 8 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 87,483 \\ \times \quad 9 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 18,471 \\ \times \quad 6 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 36,572 \\ \times \quad 8 \\ \hline \end{array}$$

9.  $3,765 \times 4$

10.  $6 \times 7,648$

11.  $5 \times 12,264$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

12. There are 36,200 pencils on each of 4 shelves at the office supply manufacturer's warehouse.

How many pencils are there altogether? \_\_\_\_\_

13. Algebra Find the value of  $7n$  when  $n$  is 7,565? \_\_\_\_\_

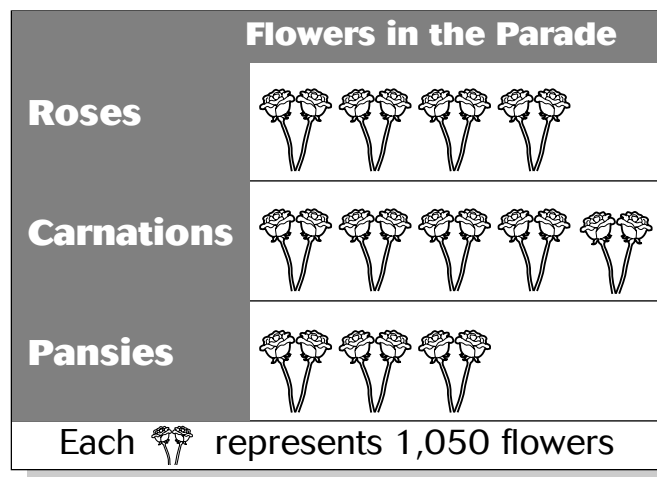
**Test Prep** Circle the correct letter for each answer. Use the pictograph for Exercises 14 and 15.

14. How many carnations are on the floats in the parade?

- A 3,150 carnations
- B 4,200 carnations
- C 5,150 carnations
- D 5,250 carnations

15. How many more roses are in the parade than pansies?

- F 1,050 more roses
- G 1,500 more roses
- H 2,100 more roses
- J 3,050 more roses



Name \_\_\_\_\_

## Multiplying Greater Numbers

1. 
$$\begin{array}{r} 263 \\ \times 17 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 534 \\ \times 86 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 3,357 \\ \times 32 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 237 \\ \times 53 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 855 \\ \times 54 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 9,362 \\ \times 71 \\ \hline \end{array}$$

7.  $421 \times 45$

8.  $357 \times 74$

9.  $64 \times 848$

10.  $93 \times 4,247$

11.  $\$99.89 \times 57$

12.  $81 \times 2,777$

13. **Mental Math** Is the product of 686 and 50 greater than or less than 30,000? Explain.

\_\_\_\_\_  
\_\_\_\_\_

14. **Algebra** Find the value of  $78 \times n$  when  $n = 3,237$ . \_\_\_\_\_

15. Laura addresses 127 envelopes every week. Each envelope contains 4 pieces of paper. How many envelopes does Laura address in one year? Remember that there are 52 weeks in a year.

\_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

16. Your pet eats food that costs \$0.25 a day. About how much does it cost to feed your pet for a year? Remember that there are 365 days in a year.

**A** \$912.50

**B** \$219.25

**C** \$95.52

**D** \$91.25

17. The animal shelter has 329 dogs in it. It costs \$0.53 per day to feed each dog. How much does all the food cost for this day?

**F** \$174.37

**G** \$126.67

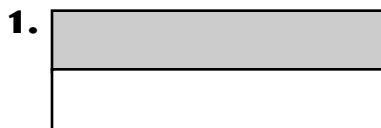
**H** \$165.00

**J** \$178.75

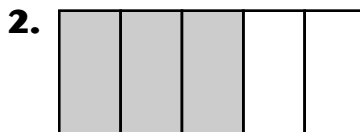
Name \_\_\_\_\_

## Parts of a Region

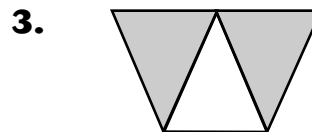
Write the fraction for the shaded part or parts of each region.



\_\_\_\_\_

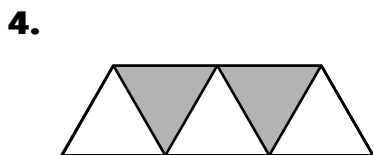


\_\_\_\_\_

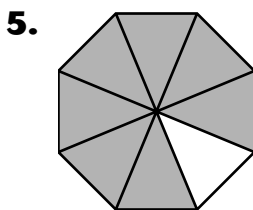


\_\_\_\_\_

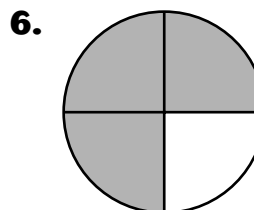
Write a fraction for the shaded parts of each region.



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

7. Jackie and Mark painted 3 of the 4 equal parts of their fort's walls. Which fraction names the part of the walls they painted?

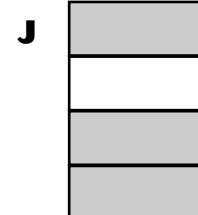
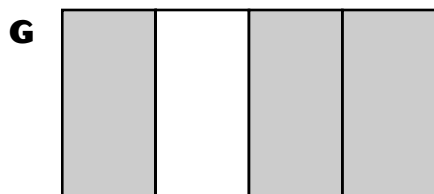
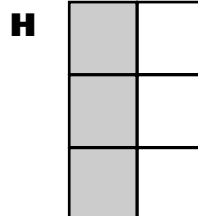
**A**  $\frac{3}{4}$

**B**  $\frac{4}{3}$

**C**  $\frac{1}{4}$

**D**  $\frac{4}{2}$

8. Which drawing does not show the fraction  $\frac{3}{4}$ ?

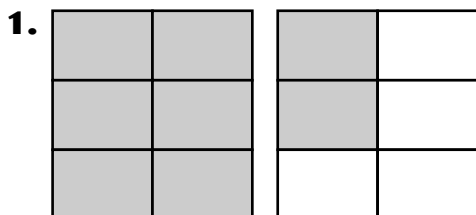




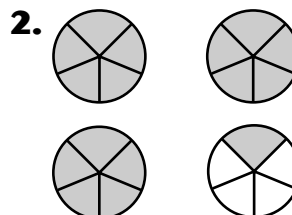
Name \_\_\_\_\_

## Mixed Numbers

Write an improper fraction as well as a mixed number or whole number for each picture.



\_\_\_\_\_



\_\_\_\_\_

Change each improper fraction to a mixed number or a whole number. Change each mixed number to an improper fraction.

3.  $\frac{5}{4}$  \_\_\_\_\_ 4.  $2\frac{5}{9}$  \_\_\_\_\_ 5.  $\frac{24}{12}$  \_\_\_\_\_ 6.  $\frac{25}{7}$  \_\_\_\_\_ 7.  $\frac{16}{9}$  \_\_\_\_\_

8. **Math Reasoning** Ned needs  $\frac{1}{4}$  of a gallon of paint to paint one room. How many rooms can he paint with 3 gallons of paint?

\_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

9. Bella bought 2 boxes of popcorn, each with 8 bags. Her guests ate 2 bags of popcorn. Which mixed number shows how many boxes of popcorn are left?

**A**  $1\frac{4}{8}$  boxes   **B**  $1\frac{2}{8}$  boxes   **C**  $1\frac{5}{8}$  boxes   **D**  $1\frac{6}{8}$  boxes

10. Which fraction is less than 1?

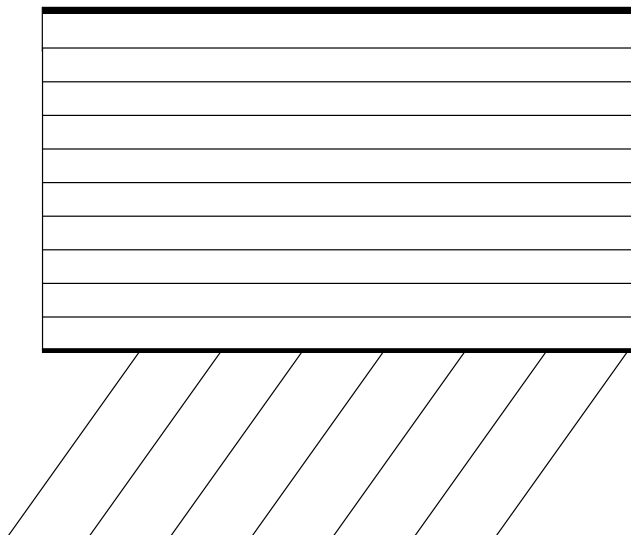
**F**  $\frac{8}{9}$    **G**  $\frac{9}{7}$    **H**  $\frac{13}{3}$    **J**  $\frac{10}{10}$

Name \_\_\_\_\_

## Making a Bar Graph

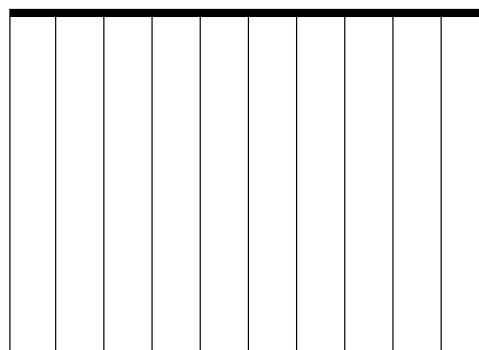
1. Make a vertical bar graph to display the data in the table.

A Fourth Grader's Time	
Activity	Hours Spent
Sleeping	8
At School	7
Transportation	1
Eating	2
Homework	2
Relaxing	3
Sports	1



2. Make a horizontal bar graph to display the data in the table.

Shape	Number of Angles
Decagon	10
Octagon	8
Hexagon	6
Pentagon	5
Triangle	3



**Test Prep** Circle the correct letter for each answer.

3. How many more hours are spent sleeping than doing homework?

**A** 6

**B** 5

**C** 4

**D** 2

4. Which shape has only 1 more angle than a pentagon?

**F** triangle

**G** hexagon

**H** decagon

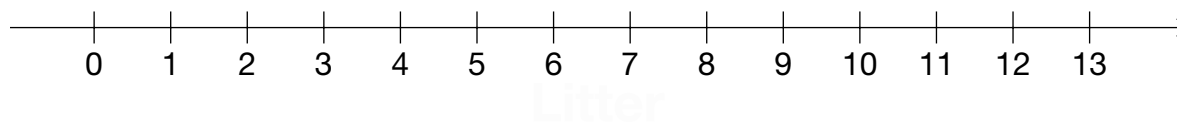
**J** octagon

Name \_\_\_\_\_

## Line Plots and Outliers

Litters	1	2	3	4	5	6	7	8	9	10	11	12
Number of Rabbits in Each Litter	II	III	IIII	IIII IIII	IIII IIII	IIII III	IIII	IIII	III	IIII	III	I

- Make a line plot of the number of rabbits in each litter.
  - Write a label at the bottom.
  - Put Xs on the number line to show the number of rabbits in a litter.



- Identify the outlier in the data above. \_\_\_\_\_
- How many Xs are shown for 6? \_\_\_\_\_
- What is the range of rabbits in a litter? \_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

- What is the number of rabbits that appears in a litter most often?
 

**A** 3 rabbits      **B** 4 rabbits      **C** 5 rabbits      **D** 6 rabbits
- What was the greatest number of rabbits in a litter?
 

**F** 5 rabbits      **G** 8 rabbits      **H** 11 rabbits      **J** 12 rabbits

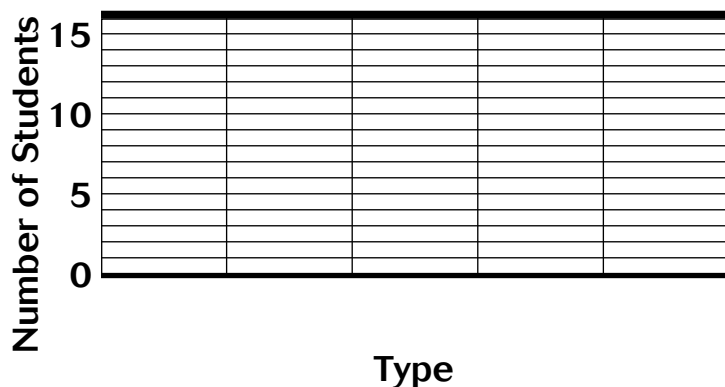
Name \_\_\_\_\_

## Problem-Solving Strategy

### Make a Graph

Members of the music club took a survey to find which types of music are most popular with students.

1. Make a bar graph showing the results of the survey.



Type of Music	
Rock and Roll	
Classical	
Rap	
Folk	
R&B	

2. In which order would you place the types of music to show the least to most popular? \_\_\_\_\_

3. Between which two types of music is there the greatest difference? \_\_\_\_\_

4. How many more music club members chose Rap than R&B? \_\_\_\_\_

5. If you were to combine Rap and R&B into one category, how would that category's bar compare with the bar showing Rock and Roll? \_\_\_\_\_

6. If you were planning a concert for the school where the survey was taken, what types of music would you recommend? Explain, using your graph to support your recommendation.

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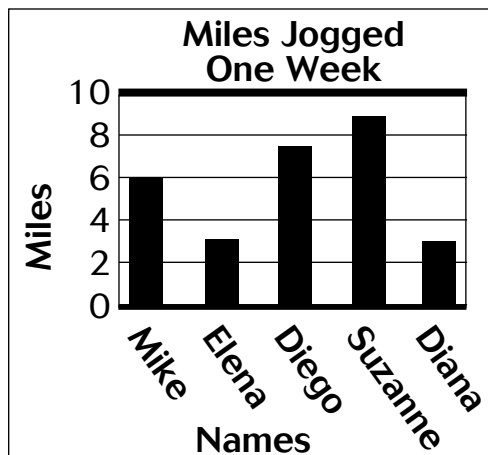
Name \_\_\_\_\_

### Problem-Solving Application

## Ways to Represent Data

Use the table or bar graph below. Explain which you used and why.

Miles Jogged One Week	
Mike	6
Elena	3
Diego	$7\frac{1}{2}$
Suzanne	9
Diana	3

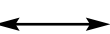


1. Who jogged the farthest? \_\_\_\_\_  
\_\_\_\_\_
2. How many students jogged at least four miles?  
\_\_\_\_\_  
\_\_\_\_\_
3. Which two students combined jogged the same distance as Mike?  
\_\_\_\_\_  
\_\_\_\_\_
4. What is the mode of this set of data?  
\_\_\_\_\_  
\_\_\_\_\_
5. What is the range of the miles jogged?  
\_\_\_\_\_  
\_\_\_\_\_

Name \_\_\_\_\_

## Points, Lines, Segments, Rays, and Angles

Tell what type of figure is shown.

1. 

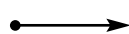
\_\_\_\_\_

2. 

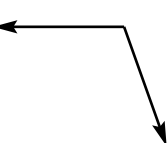
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3. 

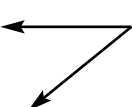
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4. 

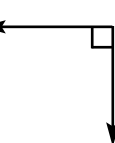
\_\_\_\_\_

5. 


\_\_\_\_\_

6. 


\_\_\_\_\_

7. 

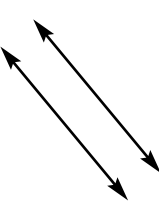
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8. 

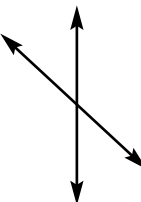
\_\_\_\_\_

9. 

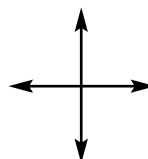
\_\_\_\_\_

10. 

\_\_\_\_\_

11. 

\_\_\_\_\_

12. 

\_\_\_\_\_

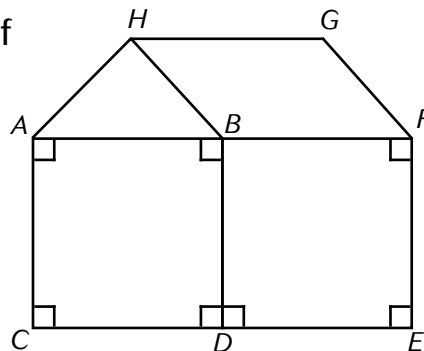
Refer to the drawing at the right. Name examples of each figure described below.

13. Name three acute angles.

\_\_\_\_\_

14. Name two obtuse angles.

\_\_\_\_\_



**Test Prep** Circle the correct letter for each answer.

15. What kind of angle would you find in a square?

**A** acute

**B** obtuse

**C** straight

**D** right

16. What types of angles can be made by the hands of a clock?

**F** right

**G** acute

**H** obtuse

**J** all types of angles

Name \_\_\_\_\_

## Polygons

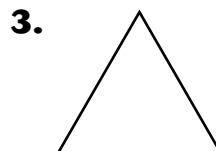
Identify each polygon. Write the number of sides and vertices.



\_\_\_\_\_



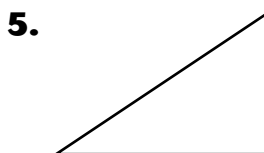
\_\_\_\_\_



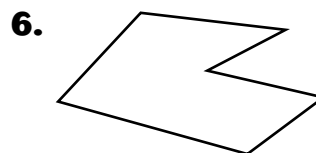
\_\_\_\_\_



\_\_\_\_\_

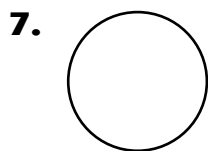


\_\_\_\_\_

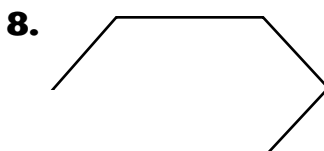


\_\_\_\_\_

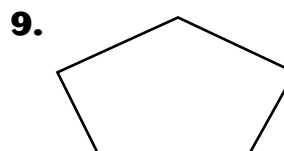
Tell if the figure is a polygon. Write *yes* or *no*.



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

**Math Reasoning** Refer to the names of polygons to help answer Exercises 10–11.

10. Some flags are tricolor. How many colors do they contain? \_\_\_\_\_

11. A weight lifter develops his quadriceps. How many parts does this thigh muscle have? \_\_\_\_\_

**Test Prep** Circle the correct letter for each answer.

12. Which polygon has 3 sides and 1 right angle?

**A** triangle

**B** hexagon

**C** quadrilateral

**D** rectangle

13. Which polygon has 8 sides?

**F** hexagon

**G** octagon

**H** quadrilateral

**J** pentagon

Name \_\_\_\_\_

## Temperature

Use the thermometer to the right. Write the equivalent temperature in degrees Fahrenheit or degrees Celsius.

1.  $-25^{\circ}\text{C}$

2.  $59^{\circ}\text{F}$

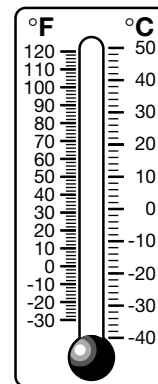
3.  $25^{\circ}\text{C}$

\_\_\_\_\_

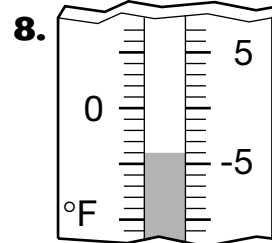
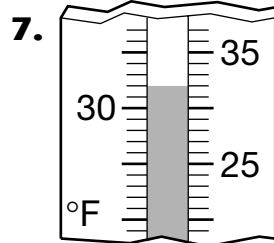
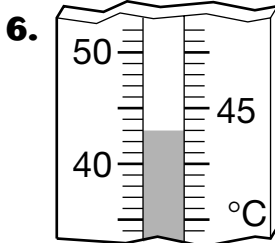
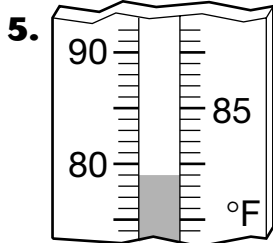
\_\_\_\_\_

\_\_\_\_\_

4. Circle the better estimate for a mild winter day.  $45^{\circ}\text{F}$  or  $45^{\circ}\text{C}$



Read each thermometer. Write the temperature in  $^{\circ}\text{F}$  or in  $^{\circ}\text{C}$ .



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Choose the most appropriate temperature in Exercises 9–12.

9. cup of hot tea:

$75^{\circ}\text{F}$  or  $120^{\circ}\text{F}$ ?

\_\_\_\_\_

10. movie theater:

$15^{\circ}\text{C}$  or  $40^{\circ}\text{C}$ ?

\_\_\_\_\_

11. ice on a puddle:

$20^{\circ}\text{C}$  or  $-25^{\circ}\text{C}$ ?

\_\_\_\_\_

	$^{\circ}\text{F}$	$^{\circ}\text{C}$
Water boils	212	100
Normal body temperature	98.6	37
Room temperature	68	20
Water freezes	32	0

12. **Math Reasoning** The temperature at noon is  $36^{\circ}\text{F}$ . It was  $10^{\circ}\text{F}$  colder at 8:00 A.M. What could the temperature have been at 10:00 A.M.?

a.  $25^{\circ}\text{F}$

b.  $31^{\circ}\text{F}$

c.  $36^{\circ}\text{F}$

**Test Prep** Circle the correct letter for the answer.

13. The temperature increased about  $3^{\circ}\text{C}$  each hour from 8:00 A.M. to 1:00 P.M.

At 8:00 A.M. the temperature was  $13^{\circ}\text{C}$ . What is the temperature at 1:00 P.M.?

A  $-25^{\circ}\text{C}$

B  $-28^{\circ}\text{C}$

C  $25^{\circ}\text{C}$

D  $28^{\circ}\text{C}$

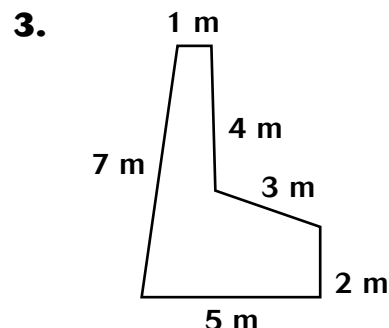
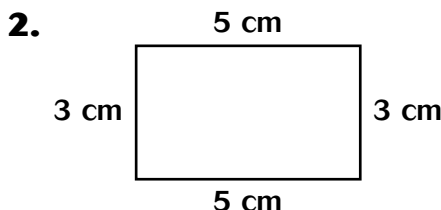
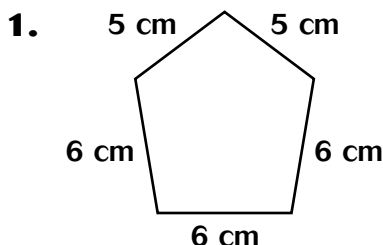


Name \_\_\_\_\_

## Perimeter

|

Find the perimeter of each figure.



4. Belinda's garden is in the shape of a rectangle, 3 meters wide and 5 meters long. How many meters of fencing will she need to go around the garden?

Find the perimeter of the rectangle with the given dimensions.

5.  $l = 7$  mm,  $w = 4$  mm    6.  $l = 12$  m,  $w = 18$  m    7.  $l = 11$  dm,  $w = 7$  dm

Find the perimeter of the square with the given side length.

8.  $s = 6$  yd    9.  $s = 12$  cm    10.  $s = 21$  mm    11.  $s = 17$  ft

**Test Prep** Circle the correct letter for each answer.

12. Ronnie's swimming pool is in the shape of a trapezoid. The lengths of the sides of the pool are 51 ft, 51 ft, 102 ft and 77 ft. What is the perimeter of her pool?

**A** 204 ft    **B** 281 ft    **C** 291 ft    **D** 280 ft

13. A playground shaped like a triangle has a perimeter of 120 meters. Two of the sides are 30 meters and 40 meters in length. How long is the third side?

**F** 100 m    **G** 40 m    **H** 50 m    **J** 70 m

Name \_\_\_\_\_

## Mental Math: Using Compatible Numbers and Compensation

Use mental math to find each sum or difference.

1.  $32 - 19 =$  \_\_\_\_\_

2.  $54 + 38 =$  \_\_\_\_\_

3.  $17 + 14 + 33 =$  \_\_\_\_\_

4.  $64 + 27 =$  \_\_\_\_\_

5.  $81 - 57 =$  \_\_\_\_\_

6.  $24 + 28 + 26 =$  \_\_\_\_\_

7.  $53 + 25 + 17 =$  \_\_\_\_\_

8.  $342 + 129 =$  \_\_\_\_\_

9.  $72 - 45 =$  \_\_\_\_\_

Use your answers to complete this message. Look in the chart for the answer that matches one of the exercise answers. Write the letter for that answer above the exercise number under the blanks below.

A = 12	H = 43	O = 92	V = 113
B = 372	I = 23	P = 24	W = 120
C = 27	J = 640	Q = 32	X = 51
D = 12	K = 91	R = 471	Y = 13
E = 78	L = 25	S = 95	Z = 26
F = 93	M = 371	T = 56	
G = 82	N = 102	U = 64	

Message: Math helps . . .

\_\_\_\_\_

1      2      3      4      6      6      5

\_\_\_\_\_

7      9      2      8      6

**Test Prep** Circle the correct letter for each answer.

**10.** What can you do to 198 to make it a number that is easier to add?

**A** add 2

**C** subtract 2

**B** divide by 2

**D** add zero

**11.** Describe an easy way to add the addend 23.

**F** add 3

**H** subtract 3

**G** subtract 2

**J** add zero

Name \_\_\_\_\_

## Adding and Subtracting Greater Whole Numbers

1. 
$$\begin{array}{r} 6,145 \\ + 2,942 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 8,734 \\ + 1,237 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 5,264 \\ - 2,147 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 7,007 \\ - 3,362 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 3,712 \\ - 1,809 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 4,627 \\ + 2,843 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 9,419 \\ + 4,865 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 4,992 \\ - 1,763 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 63,212 \\ - 14,388 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 25,109 \\ - 19,222 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 12,866 \\ + 29,745 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 46,238 \\ + 40,702 \\ \hline \end{array}$$

13.  $14,220 + 56,131$

14.  $41,028 - 26,525$

15.  $27,928 + 39,053$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

16. **Algebra** Find the value of  $n$  if  $n + 890 = 4,371$ . \_\_\_\_\_

17.  $3,728 + 895 + 627 =$  \_\_\_\_\_

18.  $\$34,620 - 5,746 =$  \_\_\_\_\_

19.  $625 + 12,419 + 5,312 =$  \_\_\_\_\_

20.  $\$70,612 - \$15,850 =$  \_\_\_\_\_

**Test Prep** Circle the correct letter for the answer.

21. There are two National Battlefields in Tennessee. Fort Donelson has an area of 536 acres. Stones River measures 3,963 acres in area. How many acres of National Battlefields are in Tennessee?

**A** 4,499 acres

**C** 4,433 acres

**B** 4,600 acres

**D** 3,499 acres

Name \_\_\_\_\_

## Multiply Two Digit Whole Numbers

1.  $\begin{array}{r} 24 \\ \times 27 \\ \hline \end{array}$  I

2.  $\begin{array}{r} 14 \\ \times 24 \\ \hline \end{array}$  N

3.  $\begin{array}{r} 45 \\ \times 16 \\ \hline \end{array}$  R

4.  $\begin{array}{r} 96 \\ \times 11 \\ \hline \end{array}$  S

5.  $\begin{array}{r} 55 \\ \times 14 \\ \hline \end{array}$  O

6.  $\begin{array}{r} 51 \\ \times 33 \\ \hline \end{array}$  A

7.  $\begin{array}{r} 42 \\ \times 43 \\ \hline \end{array}$  T

8.  $\begin{array}{r} 98 \\ \times 37 \\ \hline \end{array}$  S

9.  $\begin{array}{r} 31 \\ \times 27 \\ \hline \end{array}$  I

10.  $\begin{array}{r} 88 \\ \times 54 \\ \hline \end{array}$  R

11.  $\begin{array}{r} 96 \\ \times 55 \\ \hline \end{array}$  E

12.  $\begin{array}{r} 42 \\ \times 36 \\ \hline \end{array}$  U

13.  $\begin{array}{r} 37 \\ \times 49 \\ \hline \end{array}$  M

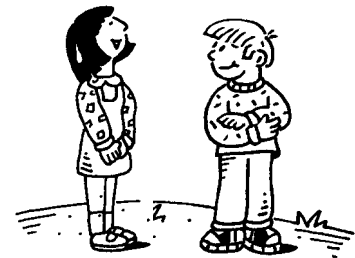
14.  $\begin{array}{r} 78 \\ \times 23 \\ \hline \end{array}$  B

15.  $\begin{array}{r} 51 \\ \times 19 \\ \hline \end{array}$  L

16.  $\begin{array}{r} 49 \\ \times 22 \\ \hline \end{array}$  y

Match the products in Exercises 1 – 16 to the numbers below the blanks and write the appropriate letter on the blank.

You are my brother, but I am not your brother. Who am I?



\_\_\_\_\_

1,078    770    1,512    4,752    1,056    648    3,626    1,806    5,280    720

**Test Prep** Circle the correct letter for each answer.

**17.** Southbank School recycles about 37 pounds of paper each week. How many pounds will they recycle in 43 weeks?

**A** 1,410 pounds    **B** 430 pounds    **C** 1,591 pounds    **D** 148 pounds

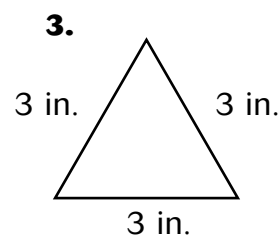
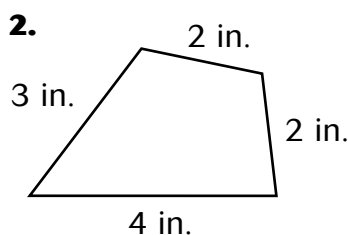
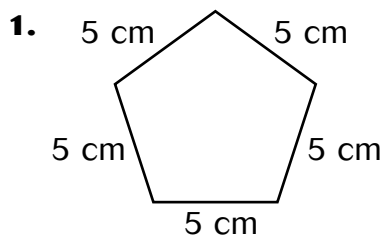
**18.** Southbank School earns \$1.19 for each 100 pounds of paper they recycle. Last year they recycled about 17,000 pounds of paper. How much did they earn for their recycling efforts?

**F** \$20,230    **G** \$202.30    **H** \$833    **J** \$119

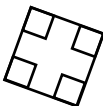

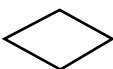
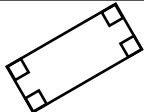
Name \_\_\_\_\_

## Quadrilaterals and Other Polygons

Classify each polygon. Tell if it is regular.



Classify each quadrilateral. Write *YES* in each column that is a name for the figure. Some figures may have more than one name.

	Trapezoid	Parallelogram	Rhombus	Rectangle	Square
4. 					
5. 					
6. 					
7. 					

8. **Algebra** Three angles of a quadrilateral measure  $35^\circ$ ,  $125^\circ$ , and  $85^\circ$ . Write and solve an equation to find the measure of the fourth angle.

9. **Math Reasoning** Three measures of a parallelogram measure  $45^\circ$ ,  $135^\circ$ , and  $135^\circ$ . What is the measure of the fourth angle?

**Test Prep** Circle the correct letter for each answer.

10. Every trapezoid is also a:

- A** square.
- B** rectangle.
- C** quadrilateral.
- D** parallelogram.

11. Every square is a:






























































- F** rhombus.
- G** rectangle.
- H** parallelogram.
- J** all of the above.

Name \_\_\_\_\_

## Problem-Solving Application

### Using a Pictograph

Use the pictograph to solve Exercises 1–7.

Population of U.S. States in 2000	
Texas	                    
Florida	               
Illinois	           
Massachusetts	     
Minnesota	    
Montana	

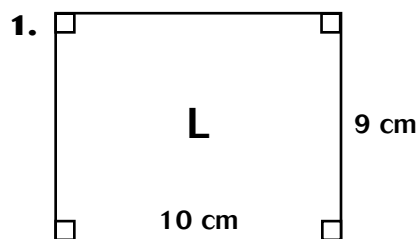
 = 1 million people

- Which state has approximately double the population of Massachusetts?  
\_\_\_\_\_
- About how many more people live in Texas than in Minnesota?  
\_\_\_\_\_
- Which state has about a third the population of Florida?  
\_\_\_\_\_
- How many times as great as Montana's population is Florida?  
\_\_\_\_\_
- The population of Florida in 1950 was about 3 million.
  - How would you show this data on the pictograph?  
\_\_\_\_\_
  - About how much did the population of Florida increase from 1950 to 2000?  
\_\_\_\_\_
- In 1950 the population of Texas was about 8 million. Approximately what will Texas' population be in 2050 if it increases the same amount as it did from 1950 to 2000?  
\_\_\_\_\_
- Which states have populations greater than 10 million people?  
\_\_\_\_\_

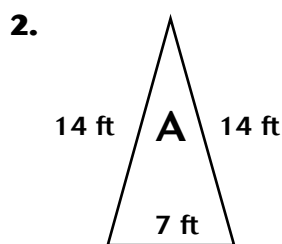
Name \_\_\_\_\_

## Perimeter

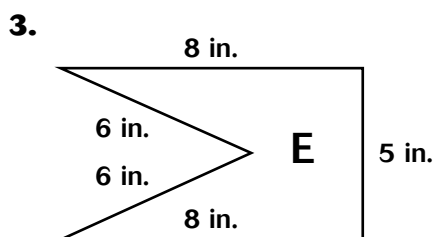
The musician and singer Paul McCartney has been called the richest man in show business. He started out as something that sounds creepy. If not knowing what he was is really bugging you, find the perimeter of each polygon below. Order the perimeters from least to greatest. The letters inside the reordered polygons will spell out the answer.



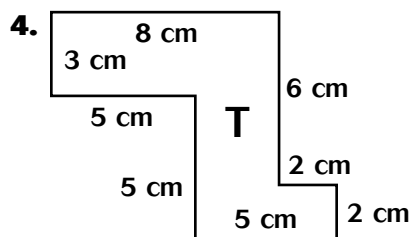
$P =$  \_\_\_\_\_



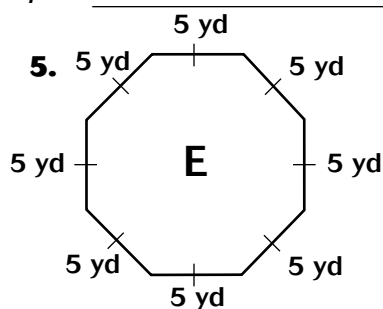
$P =$  \_\_\_\_\_



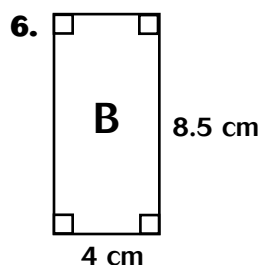
$P =$  \_\_\_\_\_



$P =$  \_\_\_\_\_



$P =$  \_\_\_\_\_



$P =$  \_\_\_\_\_

7. Paul McCartney was once a \_\_\_\_\_.

**Test Prep** Circle the correct letter for the answer.

8. Lolita has Paul McCartney's "Off the Ground" CD. If the CD case measures 12 cm by 14 cm, what is the perimeter of the case?

**A** 26 cm

**B** 50 cm

**C** 52 cm

**D** 56 cm

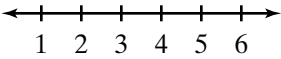
# Frequency Tables and Line Plots

Draw a line plot for each frequency table. Find the range.

1.

Number	1	2	3	4	5	6
Frequency	2	0	4	1	2	4

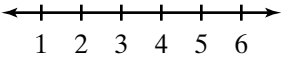
range: \_\_\_\_\_



2.

Number	1	2	3	4	5	6
Frequency	4	4	0	0	3	2

range: \_\_\_\_\_



Display each set of data in a line plot.

3. 5 1 4 6 2 6 4 5 1 3 2 6 4 5 4 6

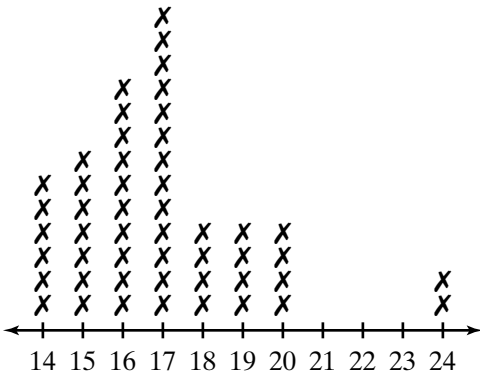
Number	1	2	3	4	5	6
Frequency	2	2	1	4	3	4

4. 4 3 1 2 1 3 3 1 3 2 1

Number	1	2	3	4
Frequency	4	2	4	1

Construct a frequency table from the line plot.

5. State Average Pupils per Teacher



Pupils per Teacher											
Frequency											

6. What is the range in pupil-teacher ratios? \_\_\_\_\_



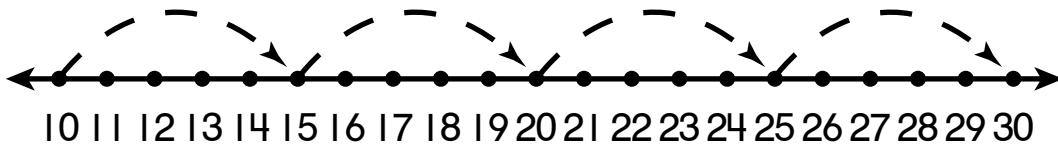
Name \_\_\_\_\_

## Counting from Any Number

---

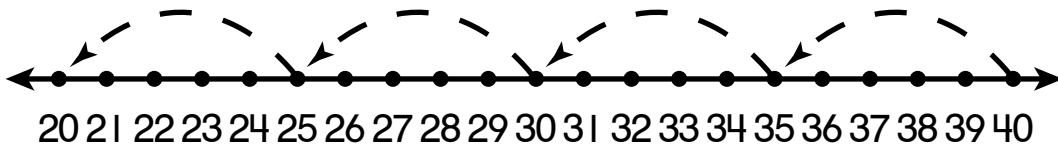
### Example

Skip count by fives. Start with 10.



10, 15, 20, 25, 30

Skip count backward by 5. Start with 40.



40, 35, 30, 25, 20

---

Write the missing numbers.

Skip count by twos.

1.

72, 74, 76, \_\_\_\_\_, \_\_\_\_\_

2.

30, 28, 26, \_\_\_\_\_, \_\_\_\_\_

Skip count by fives.

3.

45, 50, 55, \_\_\_\_\_, \_\_\_\_\_

4.

90, 85, 80, \_\_\_\_\_, \_\_\_\_\_

Name \_\_\_\_\_

**Counting from Any Number** (continued)

Write the missing numbers.

Skip count by tens.

5.

24, 34, 44, \_\_\_\_\_, \_\_\_\_\_

6.

80, 70, 60, \_\_\_\_\_, \_\_\_\_\_

Skip count by fives.

7.

25, \_\_\_\_\_, 35, 40, \_\_\_\_\_, \_\_\_\_\_, 55, \_\_\_\_\_, 65

8.

100, 95, \_\_\_\_\_, 85, \_\_\_\_\_, \_\_\_\_\_, 70, \_\_\_\_\_, 60

Skip count by tens.

9.

28, 38, \_\_\_\_\_, \_\_\_\_\_, 68, 78, \_\_\_\_\_, 98

Solve. Tell how you solved the problem.

10. Rachael has 5 baskets with 5 apples in each.

She has 2 bags with 10 oranges in each.

Does she have more apples or oranges? \_\_\_\_\_

Name \_\_\_\_\_

## Function Tables

### Example

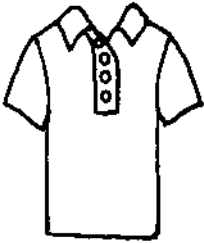
Look for a pattern.  
Complete the table.



pairs	4	3	2	1
shoes	8	6	4	2

Look for a pattern. Complete each table.

1.



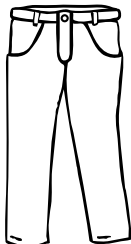
shirts	1	2	3	4	5	6
buttons	4	8				

2.



hats	1	2	3	4	5	6
stars	3	6				

3.



pants	6	5	4	3	2	1
legs	12					

Name \_\_\_\_\_

### Function Tables (continued)

Look for a pattern.

Complete each table.

4.



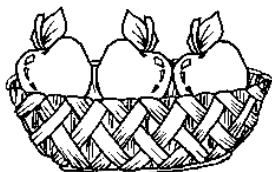
cones	1	2	3	4	5	6
dips	2					12

5.



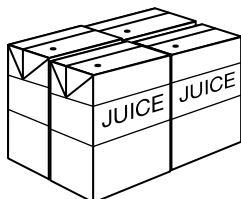
bunches	1	2	3	4	5	6
grapes	5					30

6.



baskets	8	7	6	5	4	3
apples	24	21				

7.



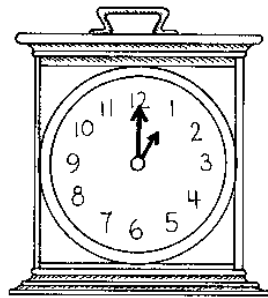
packages	1	2	3	4	5	6
cartons	4	8				

Name \_\_\_\_\_

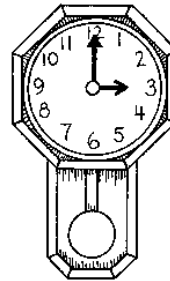
## Hour and Minute Hands

### Example

Write each time.

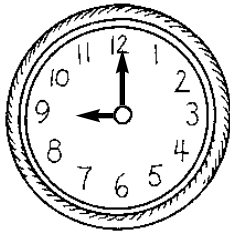


1 o'clock



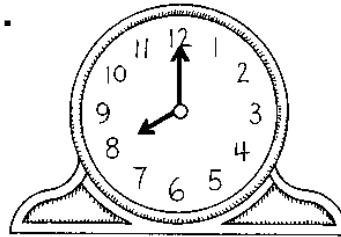
3 o'clock

1.



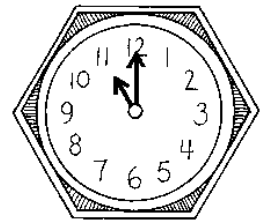
\_\_\_\_\_ o'clock

2.



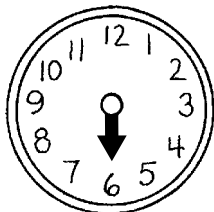
\_\_\_\_\_ o'clock

3.



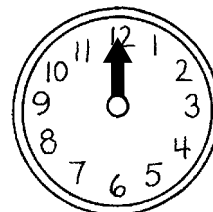
\_\_\_\_\_ o'clock

4. Draw the minute hand.



6 o'clock

5. Draw the hour hand.



3 o'clock

Name \_\_\_\_\_

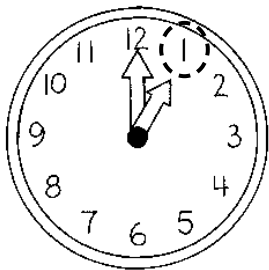
## Hour and Minute Hands (continued)

Color the hour hand  .

Circle the number to which it points.

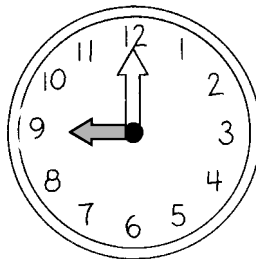
Write the time.

6.



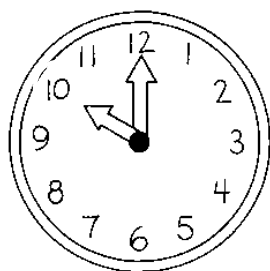
1 o'clock

7.



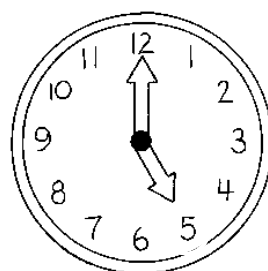
\_\_\_\_\_ o'clock

8.



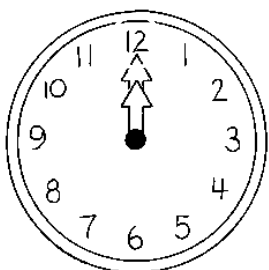
\_\_\_\_\_ o'clock

9.



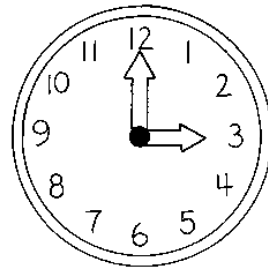
\_\_\_\_\_ o'clock

10.



\_\_\_\_\_ o'clock

11.



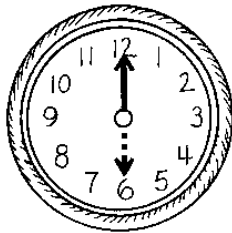
\_\_\_\_\_ o'clock

Name \_\_\_\_\_

## Time to the Hour

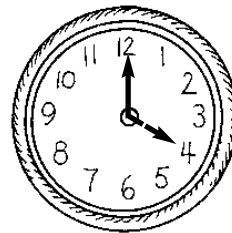
### Example

Draw the hour hand. Write each time.



6 o'clock

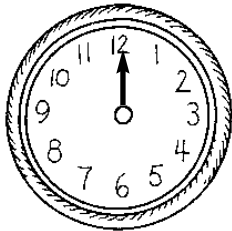
6:00



4 o'clock

4:00

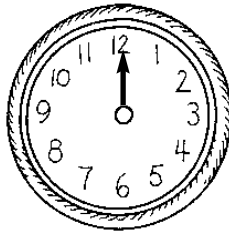
1.



9 o'clock

\_\_\_\_\_

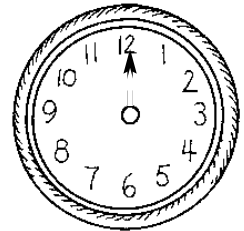
2.



11 o'clock

\_\_\_\_\_

3.

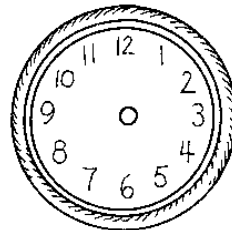


12 o'clock

\_\_\_\_\_

Draw both clock hands. Write the time.

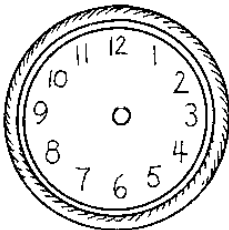
4.



3:00

\_\_\_\_\_ o'clock

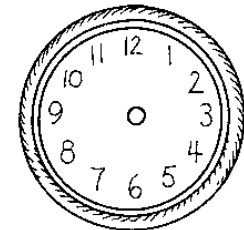
5.



10:00

\_\_\_\_\_ o'clock

6.



7:00

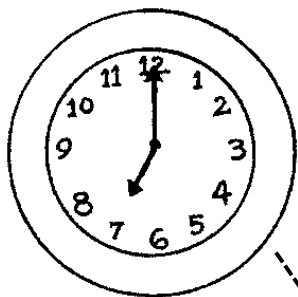
\_\_\_\_\_ o'clock

Name \_\_\_\_\_

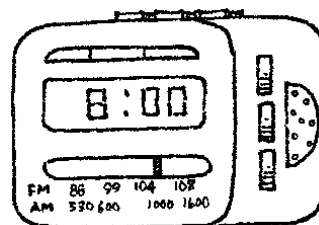
## Time to the Hour (continued)

Match.

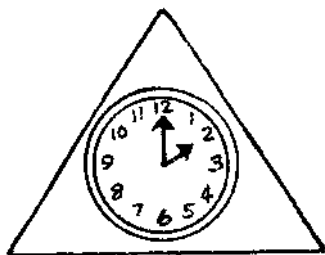
7.



2 o'clock



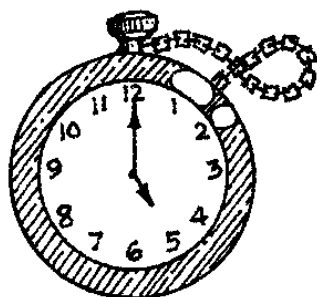
8.



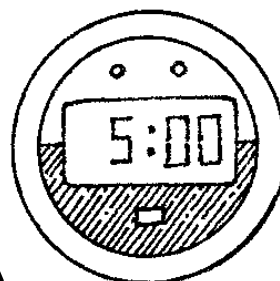
7 o'clock



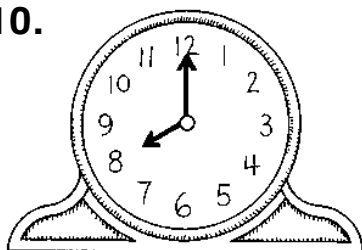
9.



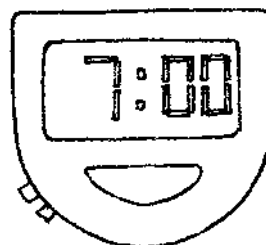
8 o'clock



10.



5 o'clock





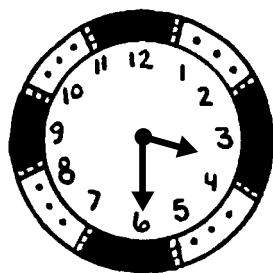
Name \_\_\_\_\_

## Time to the Half-Hour

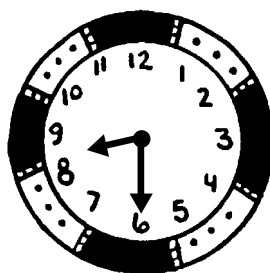
### Example

Write each time.

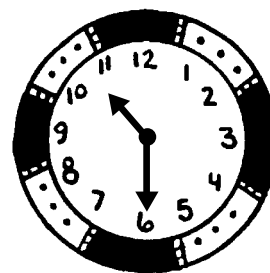
Color each clock that shows a time between 1 o'clock and 4 o'clock.



3:30

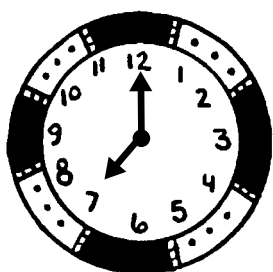


8:30



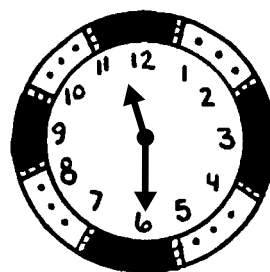
10:30

1.



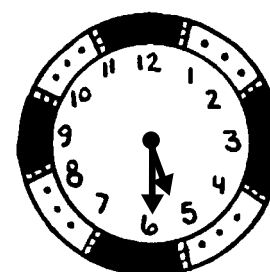
\_\_\_\_\_

2.



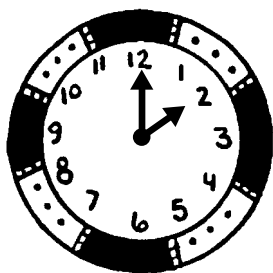
\_\_\_\_\_

3.



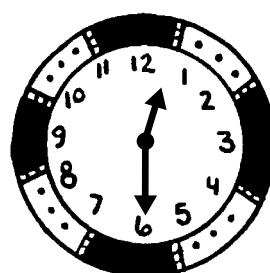
\_\_\_\_\_

4.



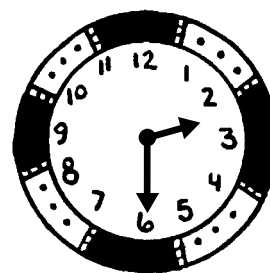
\_\_\_\_\_

5.



\_\_\_\_\_

6.



\_\_\_\_\_

Name \_\_\_\_\_

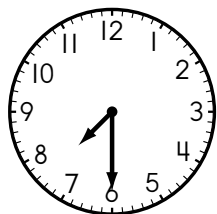
### Time to the Half-Hour (continued)

Write where the hour hand points.

Then cut out the clocks below.

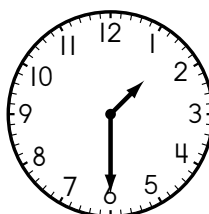
Match and paste.

7.



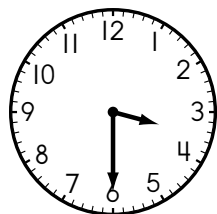
after 7:00

8.



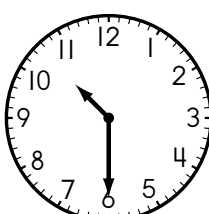
after \_\_\_\_\_

9.



after \_\_\_\_\_

10.



after \_\_\_\_\_



3:30

1:30

7:30

10:30

Name \_\_\_\_\_


## Tallying Results

---



### Example

What if you toss a nickel 10 times?

Circle **yes**, **no**, or **maybe**.


Will it land on  4 times?      yes      no      maybe



Toss a penny 10 times. Tally. Write the totals.

	Tally	Total
		
		

---

What if you toss a nickel 15 times?

1. Will it always land on  ?      yes      no      maybe
2. Toss a nickel 15 times. Tally. Write the totals.

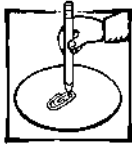
	Tally	Total
		
		

Name \_\_\_\_\_

## Tallying Results (continued)

### What You Need

paper clip  
pencil

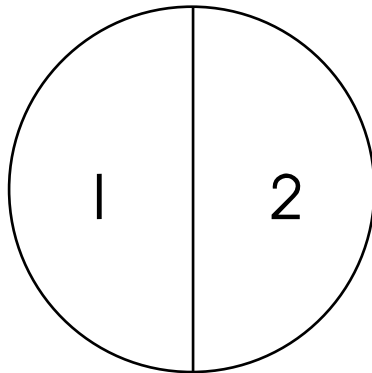


/// equals 5.  
You can use it to  
help you tally.



3. Spin 5 times.  
Circle 1 or 2 to  
show each spin.

1      2  
1      2  
1      2  
1      2  
1      2

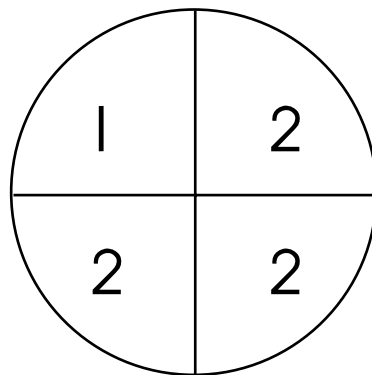


Tally your spins.

	Tally	Total
1		
2		

4. Spin 5 times.  
Circle 1 or 2 to  
show each spin.

1      2  
1      2  
1      2  
1      2  
1      2



Tally your spins.

	Tally	Total
1		
2		

5. Which spinner was more likely to  
land on 2? Why?

Name \_\_\_\_\_

# Adding With Regrouping

## Example

How many flags are there all together?

15  
+ 6  
—  
21

- ① Show 1 ten and 5 ones.  
Show 6 ones.

Tens	Ones
1	5
+	
	6
—	

Tens	Ones

- ② Add the ones.  
Change 10 ones to 1 ten.

Tens	Ones
1	5
+	
	6
—	
	1

Tens	Ones

- ③ Add the tens.  
Show the answer.

Tens	Ones
1	
+	
	5
—	
2	1

Tens	Ones

Name \_\_\_\_\_

## Adding with Regrouping (continued)

Add.

Use models if you like.

1.

Tens	Ones
<div><div></div><div>1</div></div>	<div><div></div><div>5</div></div>
+	7
<hr/>	
<div><div></div><div>2</div></div>	<div><div></div><div>2</div></div>

Tens	Ones
<div><div></div><div>2</div></div>	<div><div></div><div>5</div></div>
+	8
<hr/>	
<div><div></div><div></div></div>	<div><div></div><div></div></div>

Tens	Ones
<div><div></div><div>3</div></div>	<div><div></div><div>5</div></div>
+	9
<hr/>	
<div><div></div><div></div></div>	<div><div></div><div></div></div>

Tens	Ones
<div><div></div><div>6</div></div>	<div><div></div><div>3</div></div>
+	8
<hr/>	
<div><div></div><div></div></div>	<div><div></div><div></div></div>

2.

Tens	Ones
<div><div></div><div>1</div></div>	<div><div></div><div>7</div></div>
+	4
<hr/>	
<div><div></div><div></div></div>	<div><div></div><div></div></div>

Tens	Ones
<div><div></div><div>3</div></div>	<div><div></div><div>3</div></div>
+	8
<hr/>	
<div><div></div><div></div></div>	<div><div></div><div></div></div>

Tens	Ones
<div><div></div><div>5</div></div>	<div><div></div><div>4</div></div>
+	9
<hr/>	
<div><div></div><div></div></div>	<div><div></div><div></div></div>

Tens	Ones
<div><div></div><div>7</div></div>	<div><div></div><div>7</div></div>
+	7
<hr/>	
<div><div></div><div></div></div>	<div><div></div><div></div></div>

3.

Tens	Ones
<div><div></div><div>8</div></div>	<div><div></div><div>8</div></div>
+	1
<hr/>	
<div><div></div><div></div></div>	<div><div></div><div></div></div>

Tens	Ones
<div><div></div><div>2</div></div>	<div><div></div><div>7</div></div>
+	7
<hr/>	
<div><div></div><div></div></div>	<div><div></div><div></div></div>

Tens	Ones
<div><div></div><div>7</div></div>	<div><div></div><div>5</div></div>
+	9
<hr/>	
<div><div></div><div></div></div>	<div><div></div><div></div></div>

Tens	Ones
<div><div></div><div>4</div></div>	<div><div></div><div>4</div></div>
+	6
<hr/>	
<div><div></div><div></div></div>	<div><div></div><div></div></div>

Name \_\_\_\_\_

# Subtracting Tens and Ones

## Example

Count back ones or tens.  
Write the difference.



I can count back ones.

I can count back tens.



$$\begin{array}{r} 44 \\ - 3 \\ \hline 41 \end{array}$$

44, 43, 42, 41

$$\begin{array}{r} 75 \\ - 20 \\ \hline 55 \end{array}$$

75, 65, 55

1. 
$$\begin{array}{r} 87 \\ - 3 \\ \hline \end{array}$$

87, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

2. 
$$\begin{array}{r} 67 \\ - 40 \\ \hline \end{array}$$

67, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

3. 
$$\begin{array}{r} 86 \\ - 20 \\ \hline \end{array}$$

86, \_\_\_\_\_, \_\_\_\_\_

4. 
$$\begin{array}{r} 46 \\ - 3 \\ \hline \end{array}$$

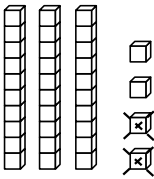
46, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Name \_\_\_\_\_

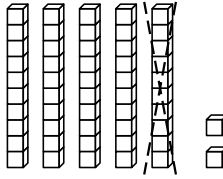
## Subtracting Tens and Ones (continued)

Subtract. Count back ones or tens.

5.

$$\begin{array}{r} 34 \\ - 2 \\ \hline 32 \end{array}$$


6.

$$\begin{array}{r} 52 \\ - 10 \\ \hline 42 \end{array}$$


You can use  
models if you  
like.



7.

$$\begin{array}{r} 16 \\ - 2 \\ \hline \end{array}$$

$$\begin{array}{r} 38 \\ - 10 \\ \hline \end{array}$$

$$\begin{array}{r} 79 \\ - 50 \\ \hline \end{array}$$

$$\begin{array}{r} 68 \\ - 3 \\ \hline \end{array}$$

$$\begin{array}{r} 14 \\ - 1 \\ \hline \end{array}$$

$$\begin{array}{r} 73 \\ - 30 \\ \hline \end{array}$$

8.

$$\begin{array}{r} 78 \\ - 20 \\ \hline \end{array}$$

$$\begin{array}{r} 16 \\ - 4 \\ \hline \end{array}$$

$$\begin{array}{r} 99 \\ - 10 \\ \hline \end{array}$$

$$\begin{array}{r} 72 \\ - 1 \\ \hline \end{array}$$

$$\begin{array}{r} 75 \\ - 2 \\ \hline \end{array}$$

$$\begin{array}{r} 72 \\ - 30 \\ \hline \end{array}$$

9.

$$\begin{array}{r} 43 \\ - 30 \\ \hline \end{array}$$

$$\begin{array}{r} 46 \\ - 3 \\ \hline \end{array}$$

$$\begin{array}{r} 56 \\ - 1 \\ \hline \end{array}$$

$$\begin{array}{r} 84 \\ - 30 \\ \hline \end{array}$$

$$\begin{array}{r} 36 \\ - 30 \\ \hline \end{array}$$

$$\begin{array}{r} 28 \\ - 2 \\ \hline \end{array}$$



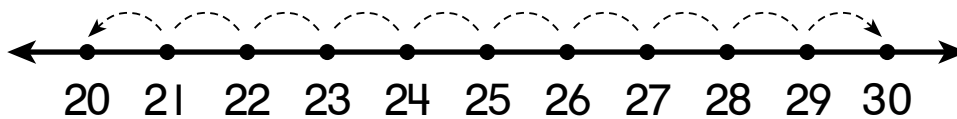
Name \_\_\_\_\_

## Rounding Numbers to the Nearest Ten

---

### Example 1

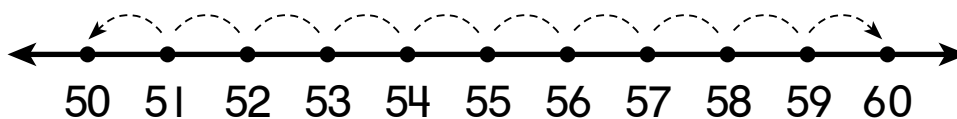
Is 24 closer to 20 or 30?



24 is closer to 20 than 30.

### Example 2

Is 56 closer to 50 or 60?

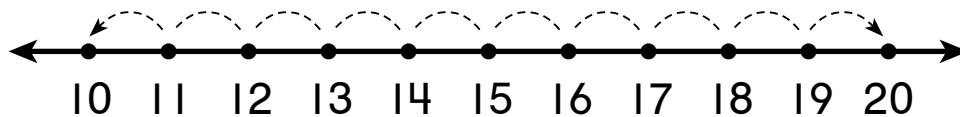


56 is closer to 60 than 50.

---

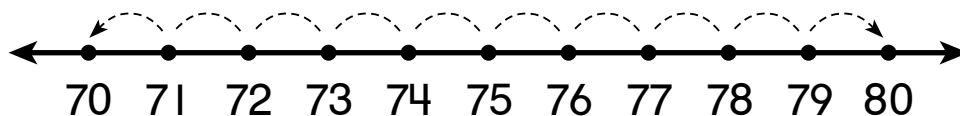
Show hops to each ten. Write the number.

1. Is 19 closer to 10 or 20?



\_\_\_\_\_

2. Is 72 closer to 70 or 80?



\_\_\_\_\_

Name \_\_\_\_\_

**Rounding Numbers to the Nearest Ten** (continued)

Write the ten that is closest to the number shown.

3.    (13) \_\_\_\_\_                      (18) \_\_\_\_\_                      (26) \_\_\_\_\_

---

4.    (32) \_\_\_\_\_                      (13) \_\_\_\_\_                      (38) \_\_\_\_\_

---

5.    (86) \_\_\_\_\_                      (23) \_\_\_\_\_                      (49) \_\_\_\_\_

---

6.    (36) \_\_\_\_\_                      (92) \_\_\_\_\_                      (74) \_\_\_\_\_

---

7. Rosie's number is  
closest to 70.  
What number could it be?

\_\_\_\_\_

\_\_\_\_\_

8. Jason's number is  
closest to 40.  
What number could it be?

\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

## Estimating to Check Results

### Example

- ① Solve the problem.  
Dana picked 12 apples.  
Rico picked 37 apples.  
How many apples did they pick together?



You can check your own answers.

$$\begin{array}{r} 12 \\ + 37 \\ \hline 49 \end{array}$$

- ② Estimate to check your answer.  
12 is closer to ten.  
37 is closer to 40.



37 is close to 40!

$$\begin{array}{r} 10 \\ + 40 \\ \hline 50 \end{array}$$

49 apples

- ③ Write the answer.

Solve the problem.

Estimate to check your answer.

Write the answer.

1. Terry sent 16 cards.  
Andy sent 21 cards.  
How many cards did they send together?

37 cards

Solve	Check
$\begin{array}{r} 16 \\ + 21 \\ \hline 37 \end{array}$	$\begin{array}{r} 20 \\ + 20 \\ \hline 40 \end{array}$

Name \_\_\_\_\_

### **Estimating to Check Results** (continued)

Solve the problem.

Estimate to check your answer.

Write the answer.

2. Sam made 37 cupcakes. Mia made 16 cupcakes. How many more cupcakes did Sam make?  _____ cupcakes	<u>Solve</u>     _____	<u>Check</u>     _____
--------------------------------------------------------------------------------------------------------------------	---------------------------------------	---------------------------------------

3. Karen found 46 shells. Josh found 33 shells. How many shells did they find in all?  _____ shells	<u>Solve</u>     _____	<u>Check</u>     _____
--------------------------------------------------------------------------------------------------------------------	---------------------------------------	---------------------------------------

4. Matt has 68¢. He buys a book for 36¢. How much does he have now?  _____ ¢	<u>Solve</u>     _____	<u>Check</u>     _____
---------------------------------------------------------------------------------------------	---------------------------------------	---------------------------------------

Name \_\_\_\_\_

## Counting On Tens

---

### Example

0	1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49

$$14 + 30 = ?$$

Start at 14. Count on 3 tens  $\Rightarrow$  24, 34, 44.

$$14 + 30 = 44$$

---

Use the chart. Count on tens to add.

1.  $25 + 10$

Start at \_\_\_\_.

Count on \_\_\_\_ ten.

$$25 + 10 = \underline{\hspace{2cm}}$$

2.  $11 + 20$

Start at \_\_\_\_.

Count on \_\_\_\_ tens.

$$11 + 20 = \underline{\hspace{2cm}}$$

3.  $29 + 20$

Start at \_\_\_\_.

Count on \_\_\_\_ tens.

$$29 + 20 = \underline{\hspace{2cm}}$$

4.  $18 + 30$

Start at \_\_\_\_.

Count on \_\_\_\_ tens.

$$18 + 30 = \underline{\hspace{2cm}}$$

Name \_\_\_\_\_

### Counting On Tens (continued)

20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79

Use the chart to count on tens.

5.

Add 10	
22	32
35	
53	
48	

6.

Add 20	
44	
25	
58	
21	

7.

Add 30	
20	
38	
48	
31	

8.

Add 40	
27	
33	
22	
35	

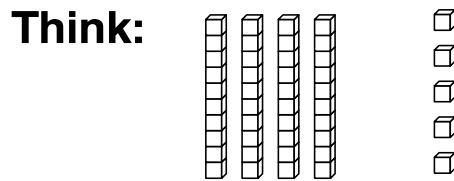
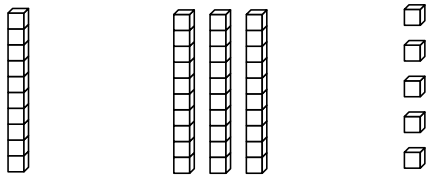
Name \_\_\_\_\_

## Breaking Apart to Add

### Example

Use mental math to break apart and add these numbers.

Add 10 and 35.



$$10 + 30 + 5$$

$$40 + 5 = 45$$

Break apart these numbers to add.

1.  $30 + 53 =$

**Think:**

$$\underline{\quad} + \underline{\quad} + \underline{\quad} =$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

2.  $10 + 15 =$

**Think:**

$$\underline{\quad} + \underline{\quad} + \underline{\quad} =$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

3.  $40 + 27 =$

**Think:**

$$\underline{\quad} + \underline{\quad} + \underline{\quad} =$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

4.  $20 + 57 =$

**Think:**

$$\underline{\quad} + \underline{\quad} + \underline{\quad} =$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

Name \_\_\_\_\_

**Breaking Apart to Add** (continued)

Break apart these numbers to add.

5.  $40 + 23 = 40 + 20 + 3 = 60 + 3 = 63$

6.  $10 + 72 =$  \_\_\_\_\_

7.  $80 + 15 =$  \_\_\_\_\_

Use mental math to add.

8.  $34 + 20 = 54$     $42 + 20 =$  \_\_\_\_\_    $54 + 30 =$  \_\_\_\_\_

9.  $27 + 30 =$  \_\_\_\_\_    $25 + 30 =$  \_\_\_\_\_    $51 + 30 =$  \_\_\_\_\_

10.  $54 + 40 =$  \_\_\_\_\_    $14 + 10 =$  \_\_\_\_\_    $32 + 20 =$  \_\_\_\_\_



Name \_\_\_\_\_

## Ways to Add

---

### Example

You can add  $16 + 20$  in different ways.

You can use models:



You can use mental math:

$$16 + 20$$

**Think:** 16, 26, **36**

You can use a  
hundred chart:

10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39

↓

You can use  
pencil and paper:

$$\begin{array}{r} 16 \\ + 20 \\ \hline 36 \end{array}$$

---

Find each sum. Use models or paper and pencil.

1.	$\begin{array}{r} 11 \\ + 54 \\ \hline 65 \end{array}$	$\begin{array}{r} 27 \\ + 62 \\ \hline \end{array}$	$\begin{array}{r} 52 \\ + 39 \\ \hline \end{array}$	$\begin{array}{r} 25 \\ + 65 \\ \hline \end{array}$	$\begin{array}{r} 59 \\ + 19 \\ \hline \end{array}$
----	--------------------------------------------------------	-----------------------------------------------------	-----------------------------------------------------	-----------------------------------------------------	-----------------------------------------------------

2.	$\begin{array}{r} 46 \\ + 9 \\ \hline \end{array}$	$\begin{array}{r} 71 \\ + 25 \\ \hline \end{array}$	$\begin{array}{r} 19 \\ + 24 \\ \hline \end{array}$	$\begin{array}{r} 66 \\ + 11 \\ \hline \end{array}$	$\begin{array}{r} 81 \\ + 7 \\ \hline \end{array}$
----	----------------------------------------------------	-----------------------------------------------------	-----------------------------------------------------	-----------------------------------------------------	----------------------------------------------------

Find each sum. Use mental math or a hundred chart.

3.  $23 + 40 = \underline{63}$        $50 + 17 = \underline{\quad}$        $37 + 60 = \underline{\quad}$

Name \_\_\_\_\_

### Ways to Add (continued)

Think about ways to solve each problem.

Write the letter of the way you choose.

Then solve.

A. tens and ones models

B. hundred chart

C. paper and pencil

D. mental math



4. 
$$\begin{array}{r} 66 \\ + 9 \\ \hline 75 \end{array}$$

I used A

$$\begin{array}{r} 79 \\ + 17 \\ \hline \end{array}$$

I used \_\_\_\_\_

$$\begin{array}{r} 20 \\ + 50 \\ \hline \end{array}$$

I used \_\_\_\_\_

$$\begin{array}{r} 53 \\ + 17 \\ \hline \end{array}$$

I used \_\_\_\_\_

---

5. 
$$\begin{array}{r} 35 \\ + 29 \\ \hline \end{array}$$

I used \_\_\_\_\_

$$\begin{array}{r} 43 \\ + 33 \\ \hline \end{array}$$

I used \_\_\_\_\_

$$\begin{array}{r} 73 \\ + 7 \\ \hline \end{array}$$

I used \_\_\_\_\_

$$\begin{array}{r} 20 \\ + 20 \\ \hline \end{array}$$

I used \_\_\_\_\_

---

6. 
$$\begin{array}{r} 11 \\ + 54 \\ \hline \end{array}$$

I used \_\_\_\_\_

$$\begin{array}{r} 45 \\ + 35 \\ \hline \end{array}$$

I used \_\_\_\_\_

$$\begin{array}{r} 58 \\ + 30 \\ \hline \end{array}$$

I used \_\_\_\_\_

$$\begin{array}{r} 20 \\ + 70 \\ \hline \end{array}$$



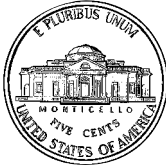

I used \_\_\_\_\_

Name \_\_\_\_\_

## Pennies, Nickels, and Dimes






### Example

Count on to find the total amount.






				
10¢	20¢	25¢	30¢	30¢
				Total

Count on to find the total amount.

1.

					
¢	¢	¢	¢	¢	¢
					Total

2.

					
¢	¢	¢	¢	¢	¢
					Total

Name \_\_\_\_\_

## Pennies, Nickels, and Dimes (continued)

Write each amount.

3.



\_\_\_\_\_ ¢

4.



\_\_\_\_\_ ¢

5.



\_\_\_\_\_ ¢

6.



\_\_\_\_\_ ¢

Solve.

7. You have eight coins that total 42¢. How many of each coin do you have?



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

## Quarters and Half-Dollars

### Example

Circle the group that is worth one quarter.

Draw a line under the group that is worth one half-dollar.



A half-dollar is worth 50¢.



A quarter is worth 25¢.

Find the value of each group.

Circle the groups that are worth one quarter.

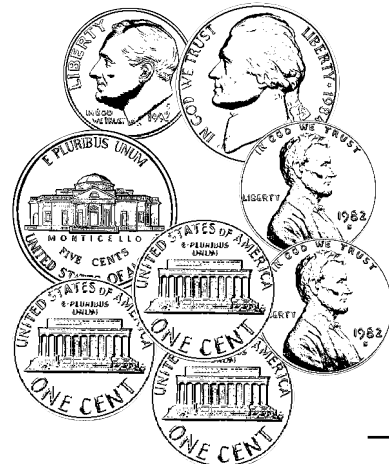
Draw a line under the groups that are worth one half-dollar.

1.



\_\_\_\_\_ ¢

2.



\_\_\_\_\_ ¢

Name \_\_\_\_\_

### Quarters and Half-Dollars (continued)

Count on to find the value of each group.

3.



\_\_\_\_\_

Total

4.



\_\_\_\_\_

Total

5.



\_\_\_\_\_

Total

6. Ayla has a quarter, a dime, and two nickels.

Ali has 3 dimes, 3 nickels, and 5 pennies.





Who has the same as a half-dollar? \_\_\_\_\_

Name \_\_\_\_\_

## Counting Sets of Coins



### Example

Count on to find the total value.

				
25¢	50¢	75¢	80¢	80¢
				Total

Count on to find the total value.

1.

					
_____	_____	_____	_____	_____	Total

2.

					
_____	_____	_____	_____	_____	Total

Name \_\_\_\_\_

### Counting Sets of Coins (continued)

Do you have enough money to buy each item?

Count the money.

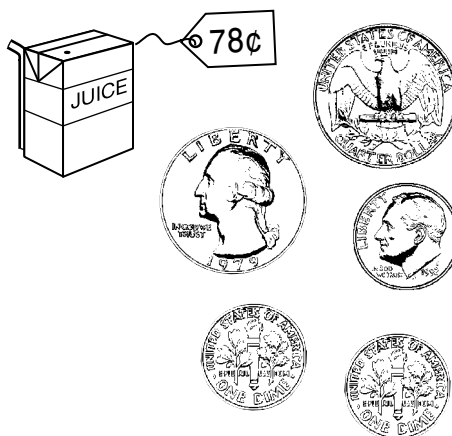
Circle **yes** or **no**.

3.



\_\_\_\_\_ yes no

4.



\_\_\_\_\_ yes no

5.



\_\_\_\_\_ yes no

6.



\_\_\_\_\_ yes no



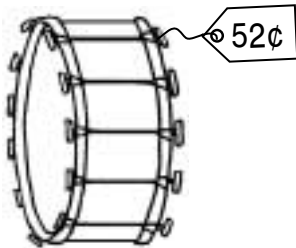
Name \_\_\_\_\_

## Ways to Show Amounts

---

### Example

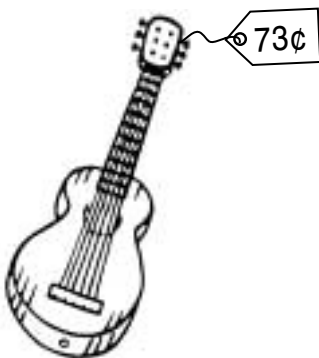
Write 2 ways to show how many of each coin you could use.



<u>1</u>	half-dollars	<u>        </u>	half-dollars
<u>        </u>	quarters	<u>1</u>	quarters
<u>        </u>	dimes	<u>2</u>	dimes
<u>        </u>	nickels	<u>1</u>	nickels
<u>2</u>	pennies	<u>2</u>	pennies

---

1. Write 2 ways to show how many of each coin you could use.



<u>        </u>	half-dollars	<u>        </u>	half-dollars
<u>        </u>	quarters	<u>        </u>	quarters
<u>        </u>	dimes	<u>        </u>	dimes
<u>        </u>	nickels	<u>        </u>	nickels
<u>        </u>	pennies	<u>        </u>	pennies

Name \_\_\_\_\_

**Ways to Show Amounts** (continued)

Use coins to show each amount in different ways.

Use tally marks to record the coins you use.

2.

Ways to show 67¢				
half-dollars	quarters	dimes	nickels	pennies

3.

Ways to show 91¢				
half-dollars	quarters	dimes	nickels	pennies

Name \_\_\_\_\_

## Dollars

---

### Example

Write how many more coins you need to make one dollar. Write the total number of coins.

Write the total amount in cents.

Then write the amount in dollars.

10 dimes

Use dimes



4

more dimes

100 ¢



\$ 1.00

---

Write how many more coins you need to make one dollar. Write the total number of coins. Write the total amount in cents, then in dollars.

1. Use nickels

\_\_\_\_\_ nickels



\_\_\_\_\_ ¢

more nickels

\$ .

Name \_\_\_\_\_

## Dollars (continued)

Write each amount in cents.

Then write the amount in dollars.

2.



\_\_\_\_\_ ¢

\$ \_\_\_\_\_

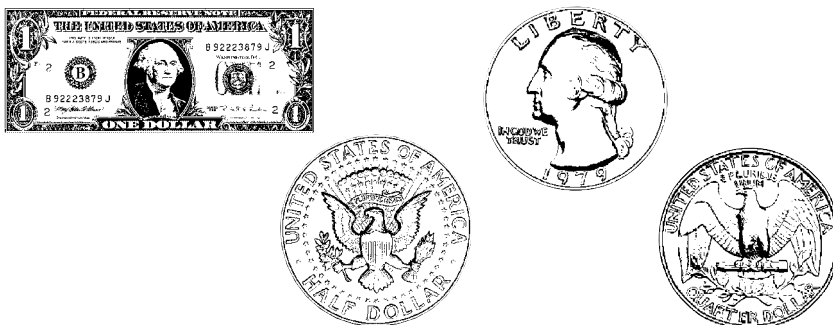
3.



\_\_\_\_\_ ¢

\$ \_\_\_\_\_

4.



\_\_\_\_\_ ¢

\$ \_\_\_\_\_

5.



\_\_\_\_\_ ¢

\$ \_\_\_\_\_

Name \_\_\_\_\_

## Making Change

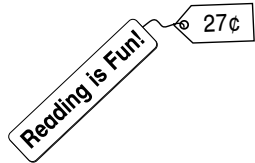
### Example

Use pennies. Count up from the price.  
Write how much change.

Price	You Pay	Your Change
		<u>2</u> ¢

To make change for 50¢, I count up from the price of 48¢—49¢, 50¢. My change is 2¢.

Use pennies.  
Count up from the price.  
Write how much change.

	Price	You Pay	Your Change
1.			<u>      </u> ¢
2.			<u>      </u> ¢

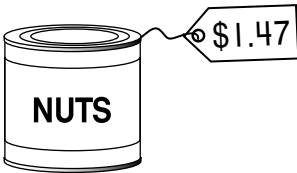

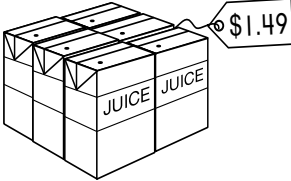

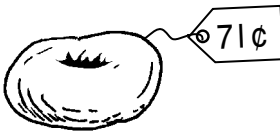

Name \_\_\_\_\_

### Making Change (continued)

Use pennies.

Count up from the price.

Write how much change.

	Price	You Pay	Your Change
3.			_____ ¢
4.			_____ ¢
5.			_____ ¢

Name \_\_\_\_\_

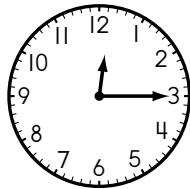
## Time to the Quarter-Hour

### Example

Look at the clock. Write the hour.

Then write how many minutes

after the hour. Circle the time.



hour 12

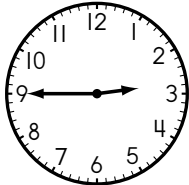
minutes 15

1:15

12:15

11:15

1.



hour \_\_\_\_\_

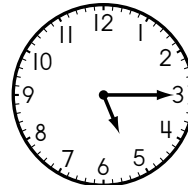
minutes \_\_\_\_\_

2:45

3:45

1:45

2.



hour \_\_\_\_\_

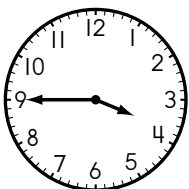
minutes \_\_\_\_\_

4:15

6:15

5:15

3.



hour \_\_\_\_\_

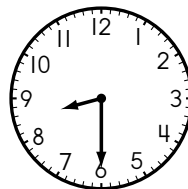
minutes \_\_\_\_\_

1:45

2:45

3:45

4.



hour \_\_\_\_\_

minutes \_\_\_\_\_

7:30

8:30

9:30

Name \_\_\_\_\_

## Time to the Quarter-Hour (continued)

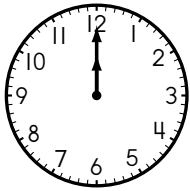


In today's race, one runner starts every 15 minutes. The order of the runners can be told by the numbers on their shirts. Write the name of each runner under the clock that shows when she or he starts running. Then write the time a different way.

Look for the pattern.

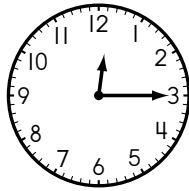


5.



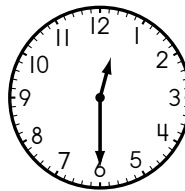
Cora

12: 00



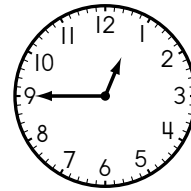
\_\_\_\_\_

12: \_\_\_\_\_



\_\_\_\_\_

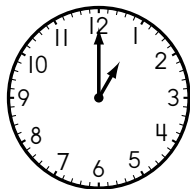
12: \_\_\_\_\_



\_\_\_\_\_

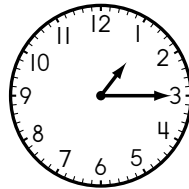
12: \_\_\_\_\_

6.



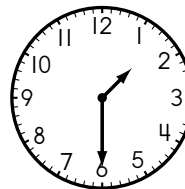
\_\_\_\_\_

1: \_\_\_\_\_



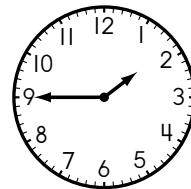
\_\_\_\_\_

1: \_\_\_\_\_



\_\_\_\_\_

1: \_\_\_\_\_



\_\_\_\_\_

1: \_\_\_\_\_



Name \_\_\_\_\_

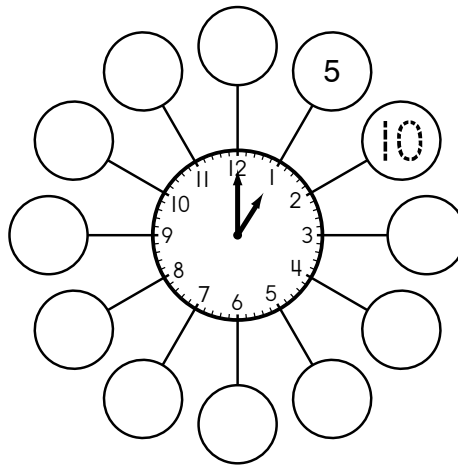
## Time to Five Minutes

### Example

Count by fives.

5, 10, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 35, \_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_, 60

Count by fives around the clock.



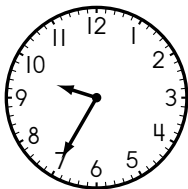
Find the minutes after the hour. Write the time in two ways.



8: 05

5 minutes after 8

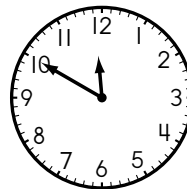
1.



9: \_\_\_\_

\_\_\_\_ minutes after \_\_\_\_

2.



11: \_\_\_\_

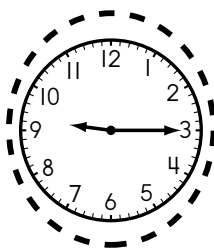
\_\_\_\_ minutes after \_\_\_\_

Name \_\_\_\_\_

### Time to Five Minutes (continued)

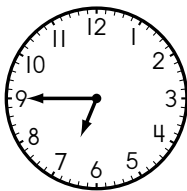
Find two ways that show the same minutes after the hour.  
Circle the times that are the same.

3. 15 minutes after 9



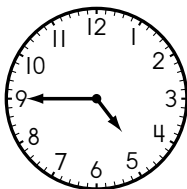
9:20

4. 35 minutes after 6



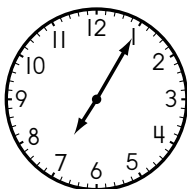
6:35

5. 45 minutes after 3



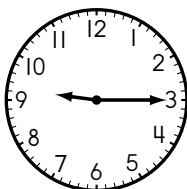
4:45

6. 5 minutes after 7



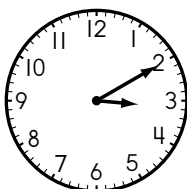
7:15

7. 15 minutes after 8



9:15

8. 10 minutes after 3



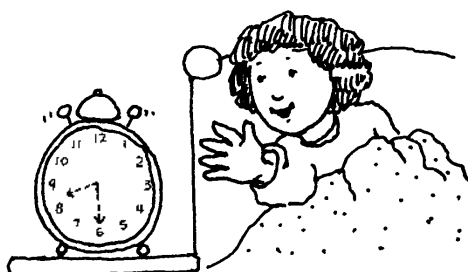
3:50

Name \_\_\_\_\_

# Telling Time

## Example

Write the matching time or show it on the clock.



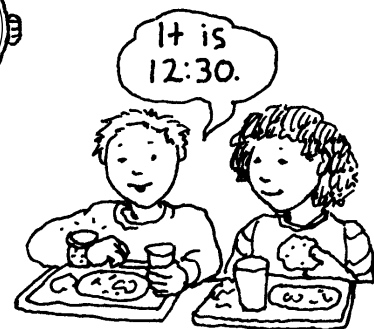
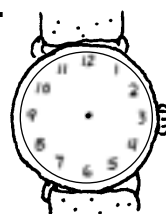
Max wakes up at 8:30.

1.



The time is \_\_\_\_\_ o'clock.

2.



3.



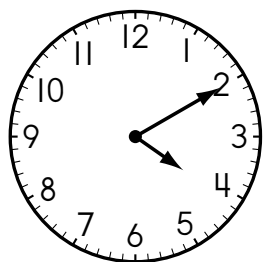
The time is \_\_\_\_\_ o'clock.

4.



Name \_\_\_\_\_

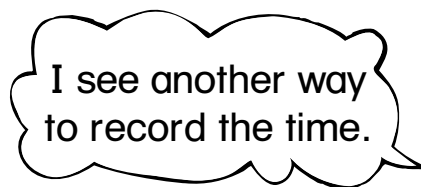
## Telling Time (continued)



4:45

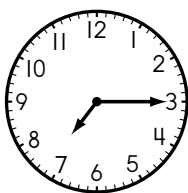
4:20

4:10



Circle the time that matches.

5.

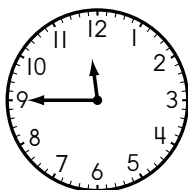


7:45

6:15

7:15

6.

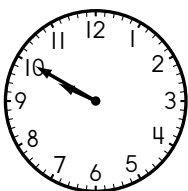


11:45

12:00

12:15

7.

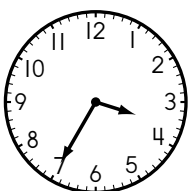


9:50

9:10

10:10

8.



3:50

3:35

2:35

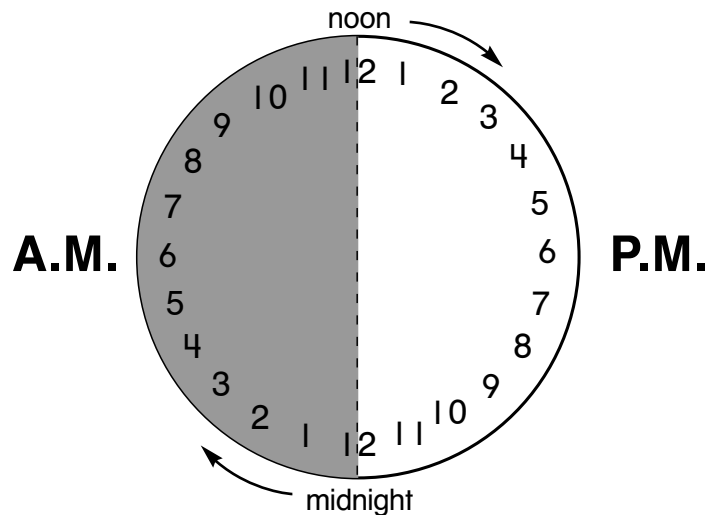
Name \_\_\_\_\_

## A.M. and P.M.

---

The time from noon until midnight is P.M.

The time from midnight until noon is A.M.



### Example

The plane took off at 11:00 A.M.

It landed at 2:00 P.M.

How long was the flight?

3 hours

- 
1. Jamie went to play catch at 10:30 A.M.

He came home at 12:30 P.M.

How long did he play? \_\_\_\_\_

2. Roger began cooking dinner at 5:30 P.M.

He began eating dinner 2 hours later.

At what time did he eat? \_\_\_\_\_

3. The movie began at 1:00 P.M.

It was 2 hours long.

At what time was the movie over? \_\_\_\_\_

Name \_\_\_\_\_

**A.M. and P.M. (continued)**

Use the diagram in the example to solve the problems.

4. Lisa's family left for Chicago at 9:00 A.M.  
They traveled for 6 hours.  
At what time did they get to Chicago? 3:00 P.M.
5. Terry started doing her homework at 4:00 P.M.  
She stopped at 6:00 P.M.  
How long did she work? \_\_\_\_\_
6. Kai eats breakfast at 8:00 A.M. and lunch at 12:00 P.M.  
How long is it between her  
breakfast and lunch? \_\_\_\_\_
7. Sandra works on her stamp collection for 2 hours.  
She starts at 9:00 A.M. After that, she goes  
to the aquarium for 3 hours.  
What time is it then? \_\_\_\_\_
8. Kevin went into the zoo at 2:00 P.M.  
He was there for 4 hours.  
What time did he leave? \_\_\_\_\_

Name \_\_\_\_\_

## Elapsed Time

### Example

Write how many hours have passed.

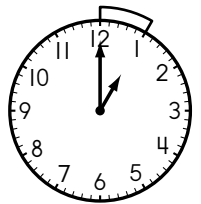
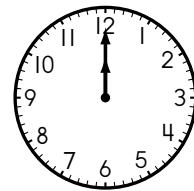
Kyle started eating lunch at 12 o'clock.  
He finished at 1 o'clock.  
It took 1 hour.



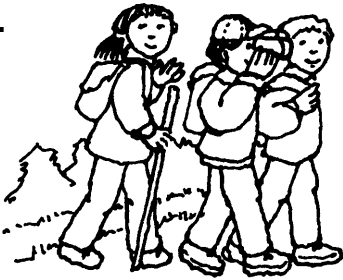
Start 12:00

End 1:00

1 hour



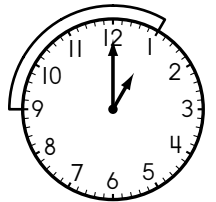
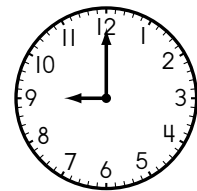
1.



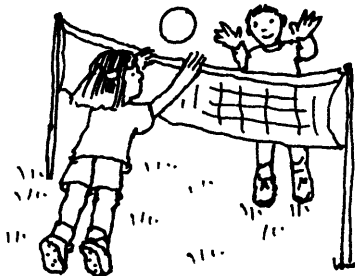
Start \_\_\_\_\_

End \_\_\_\_\_

\_\_\_\_\_ hours



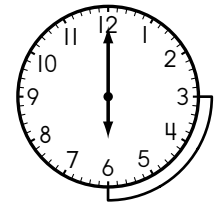
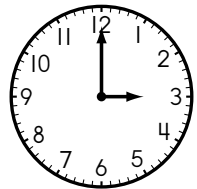
2.



Start \_\_\_\_\_

End \_\_\_\_\_

\_\_\_\_\_ hours



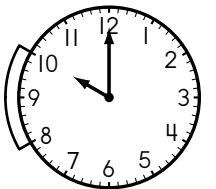
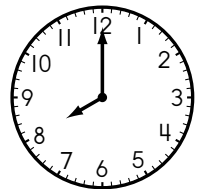
3.



Start \_\_\_\_\_

End \_\_\_\_\_

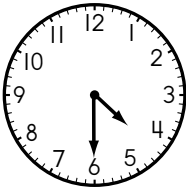
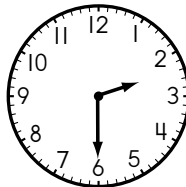
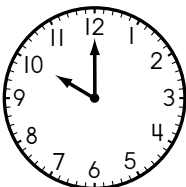
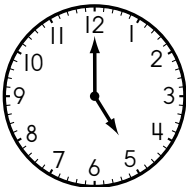
\_\_\_\_\_ hours



Name \_\_\_\_\_

### Elapsed Time (continued)

Write each end time.

Activity	Starts	Lasts	Ends
4. Pick up toys.	 4:30	1 hour	<u>5:30</u>
5. Write a letter.	 2:30	30 minutes	_____
6. Play soccer.	 10:00	1 hour and 30 minutes	_____
7. Feed a pet.	 5:00	15 minutes	_____



Name \_\_\_\_\_

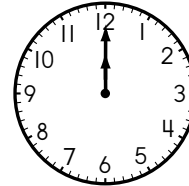
## Equivalent Times

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### Example

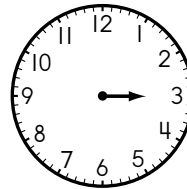
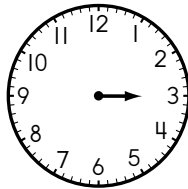
Count by fives around the clock.

How many minutes are in one hour?



60

- 
1. Draw the minute hand for 3:15. Then count by fives until 3:30, and draw the new minute hand. This is a quarter hour.



How many minutes are in one quarter hour? \_\_\_\_\_

- 
2. How many minutes are in one half hour? \_\_\_\_\_

- 
3. How many quarter hours are in one half hour? \_\_\_\_\_

Name \_\_\_\_\_

## Equivalent Times (continued)

Use the calendar to answer the questions.

January						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

February						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

March						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

April						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

May						
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

June						
S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

July						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

August						
S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

September						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

October						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

November						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

December						
S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

3. How many months are in a year? \_\_\_\_\_

4. How many months have 30 days? \_\_\_\_\_

5. How many days are in a week? \_\_\_\_\_

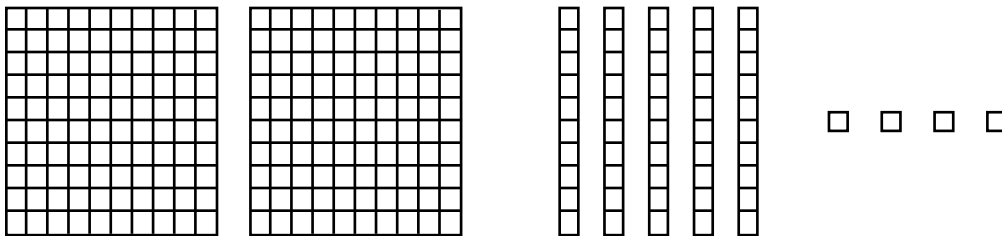
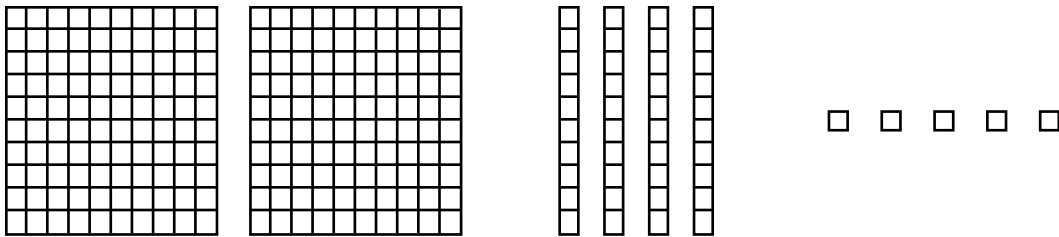
Name \_\_\_\_\_

## Comparing Numbers to 1,000

### Example

Compare 245 and 254.

First compare the hundreds. If the hundreds are the same, compare the tens.



245 is **less than** 254

$245 < 254$

Circle  $<$ ,  $>$ , or  $=$ .

1.       $<$   
      672  $>$  762  
      =

2.       $<$   
      543  $>$  528  
      =

3.       $<$   
      306  $>$  306  
      =

4.       $<$   
      140  $>$  104  
      =

Name \_\_\_\_\_

**Comparing Numbers to 1,000** (continued)

Compare. Write  $<$ ,  $>$ , or  $=$ .

5.  $294 \bigcirc 346$

$603 \bigcirc 598$

$803 \bigcirc 903$

---

6.  $450 \bigcirc 450$

$163 \bigcirc 173$

$295 \bigcirc 259$

---

7.  $372 \bigcirc 327$

$500 \bigcirc 501$

$438 \bigcirc 348$

---

8.  $704 \bigcirc 740$

$912 \bigcirc 911$

$443 \bigcirc 443$

---

9.  $621 \bigcirc 612$

$801 \bigcirc 801$

$172 \bigcirc 182$

---

10.  $278 \bigcirc 287$

$350 \bigcirc 349$

$986 \bigcirc 968$

---

**Math Reasoning**

Use the clues to find each number.

11. It is greater than 836.  
It is less than 841.  
It has a 9 in the  
ones place.

The number is \_\_\_\_\_.

12. It is greater than 297.  
It is less than 302.  
It has a 1 in the  
ones place.

The number is \_\_\_\_\_.

Name \_\_\_\_\_

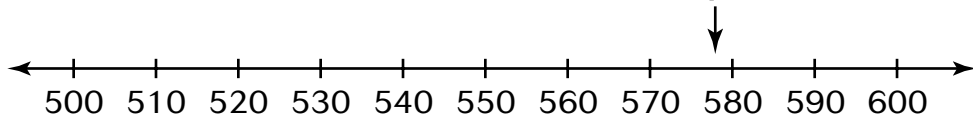
## Rounding to the Nearest Hundred

---

### Example

Use the number line.

Look for the closer hundred. Complete.



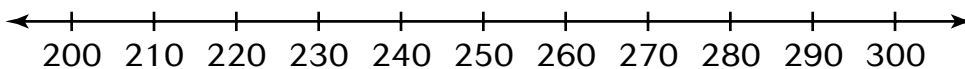
578 is between 500 and 600.

578 is closer to 600.

---

Use the number line.

Look for the closer hundred. Complete.



1. 231 is between \_\_\_\_\_ and \_\_\_\_\_.

231 is closer to \_\_\_\_\_.

---

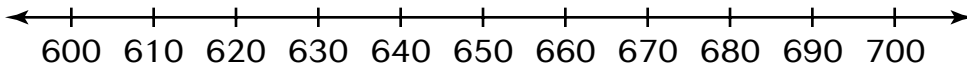
2. 215 is closer to \_\_\_\_\_. 267 is closer to \_\_\_\_\_.

Name \_\_\_\_\_

**Rounding to the Nearest Hundred** (continued)

Use the number line.

Look for the closer hundred. Complete.



3.

628 is closer to \_\_\_\_\_. 687 is closer to \_\_\_\_\_.

---

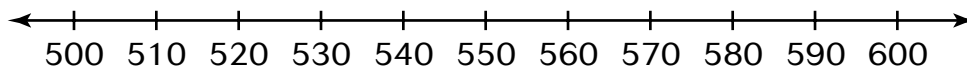
4. 663 is closer to \_\_\_\_\_. 674 is closer to \_\_\_\_\_.

---

5. 651 is closer to \_\_\_\_\_. 645 is closer to \_\_\_\_\_.

---

6. What number is halfway between 600 and 700? \_\_\_\_\_



7. 512 is closer to \_\_\_\_\_. 597 is closer to \_\_\_\_\_.

---

8. 562 is closer to \_\_\_\_\_. 553 is closer to \_\_\_\_\_.

---

9. What number is halfway between 500 and 600? \_\_\_\_\_

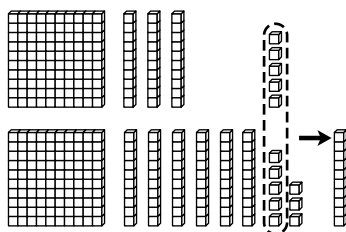
Name \_\_\_\_\_

# Adding Three-Digit Numbers

## Example

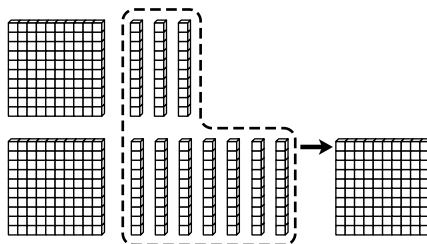
The class has 135 books. They got 168 more books.  
How many books in all? Follow the steps to add.

① Add the ones.  
Regroup.



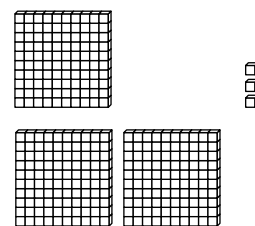
	H	T	O
	1	3	5
+	1	6	8
			3

② Add the tens.  
Regroup.



	H	T	O
	1	3	5
+	1	6	8
		0	3

③ Add the hundreds.



	H	T	O
	1	3	5
+	1	6	8
	3	0	3

Add. Draw or use models if you like.

1.

	H	T	O
	1	4	9
+	3	7	0

2.

	H	T	O
		2	3
+	3	8	8

Name \_\_\_\_\_

## Adding Three-Digit Numbers (continued)

Find each sum. Regroup if needed.

Draw or use models if you like.

3.

	H	T	O
	<input type="text"/>	<input type="text"/>	
	1	3	6
+	2	1	5
	3	5	1

Add ones.

Regroup?

Add tens.

Regroup?

Add hundreds.

yes no

yes no

4.

	H	T	O
	<input type="text"/>	<input type="text"/>	
	2	1	7
+	5	4	8

	H	T	O
	<input type="text"/>	<input type="text"/>	
	3	5	3
+	2	7	4

	H	T	O
	<input type="text"/>	<input type="text"/>	
	7	3	1
+		8	5

	H	T	O
	<input type="text"/>	<input type="text"/>	
	6	3	6
+	2	7	1

5.

	H	T	O
	<input type="text"/>	<input type="text"/>	
	4	0	7
+	1	7	5

	H	T	O
	<input type="text"/>	<input type="text"/>	
	5	4	0
+	3	7	0

	H	T	O
	<input type="text"/>	<input type="text"/>	
		8	4
+	5	5	5

	H	T	O
	<input type="text"/>	<input type="text"/>	
	8	1	1
+	1	0	9



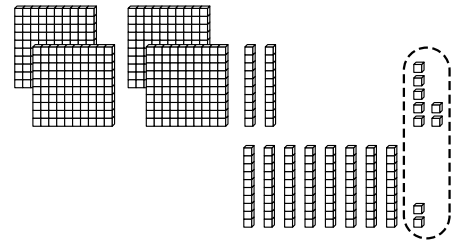
Name \_\_\_\_\_

# Three-Digit Addition

## Example

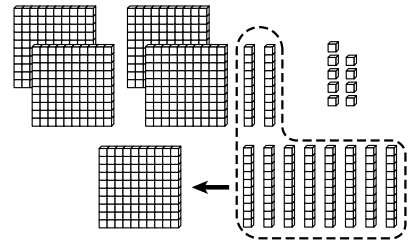
① Add the ones. Regroup? No.

$$\begin{array}{r} 4 \text{ hundreds } 2 \text{ tens } 7 \text{ ones} \\ + \quad \quad \quad 8 \text{ tens } 2 \text{ ones} \\ \hline \quad \quad \quad 9 \text{ ones} \end{array}$$



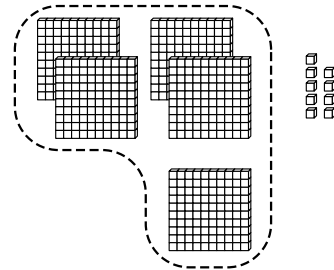
② Add the tens. Regroup? Yes.

$$\begin{array}{r} 4 \text{ hundreds } 2 \text{ tens } 7 \text{ ones} \\ + \quad \quad \quad 8 \text{ tens } 2 \text{ ones} \\ \hline \quad 0 \text{ tens } 9 \text{ ones} \end{array}$$



③ Add the hundreds.

$$\begin{array}{r} 4 \text{ hundreds } 2 \text{ tens } 7 \text{ ones} \\ + \quad \quad \quad 8 \text{ tens } 2 \text{ ones} \\ \hline 5 \text{ hundreds } 0 \text{ tens } 9 \text{ ones} \end{array}$$



Add. Regroup if you can. Use models if you like.

1.

$$\begin{array}{r} 1 \text{ hundred } 3 \text{ tens } 7 \text{ ones} \\ + \quad \quad \quad 5 \text{ tens } 2 \text{ ones} \\ \hline \end{array}$$

\_\_\_ hundred    \_\_\_ tens    \_\_\_ ones

2.

$$\begin{array}{r} 3 \text{ hundreds } 8 \text{ tens } 4 \text{ ones} \\ + \quad \quad \quad 5 \text{ tens } 3 \text{ ones} \\ \hline \end{array}$$

\_\_\_ hundreds    \_\_\_ tens    \_\_\_ ones

Name \_\_\_\_\_

### Three-Digit Addition (continued)

Find the sum. Regroup if you can. Use models if you like.

3.

5 hundreds	2 tens	4 ones
+ 3 hundreds	3 tens	3 ones
<hr/>		
_____ hundreds	_____ tens	_____ ones

4.

2 hundreds	2 tens	2 ones
+ 4 hundreds	6 tens	9 ones
<hr/>		
_____ hundreds	_____ tens	_____ one

5.

1 hundred	6 tens	5 ones
+ 7 hundreds	1 ten	8 ones
<hr/>		
_____ hundreds	_____ tens	_____ ones

6.

7 hundreds	9 tens	6 ones
+ _____	3 tens	4 ones
<hr/>		
_____ hundreds	_____ tens	_____ ones

Name \_\_\_\_\_

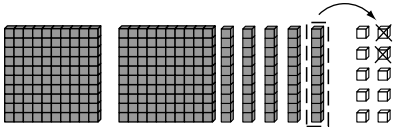
# Subtracting With Zeros

## Example

The Hermosa Bike Club planned a 250-mile bike trip. After the first week, they had ridden 122 miles. How many miles do they have left to bike?

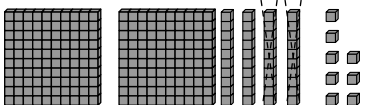
- ① Subtract the ones. Regroup if you need to.

H	T	O
2	<del>5</del>	<del>0</del>
1	2	2
		8



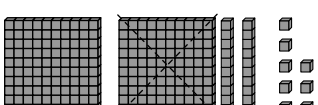
- ② Subtract the tens. Regroup if you need to.

H	T	O
2	<del>5</del>	<del>0</del>
1	2	2
	2	8

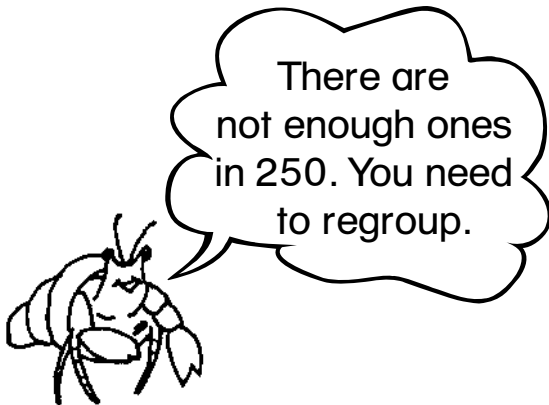


- ③ Subtract the hundreds.

H	T	O
<del>2</del>	<del>5</del>	<del>0</del>
1	2	2
1	2	8



128 miles



Name \_\_\_\_\_

## Subtracting With Zeros (continued)

Subtract. Use models.

1.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
4	0	10
- 2	- 0	- 7
2	0	3

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
4	4	1
- 2	- 4	- 4

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
5	2	2
- 2	- 0	- 0

2.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
2	5	2
- 1	- 2	- 0

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
1	5	2
-	- 2	- 3

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
4	2	3
- 2	- 3	- 2

3.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
9	5	0
-	- 2	- 0

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
7	0	3
- 1	- 5	- 2

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
5	7	2
- 1	- 8	- 2

Name \_\_\_\_\_

# Practicing Subtraction

## Example

① Subtract the ones. Regroup if you can.

H	T	O
	4	37
—	2	95
		2

② Subtract the tens. Regroup if you can.

H	T	O
3	13	
<del>4</del>	<del>3</del>	7
—	2	95
	4	2

③ Subtract the hundreds.

H	T	O
3	13	
<del>4</del>	<del>3</del>	7
—	2	95
1	4	2

Subtract. Use models if you like.

1.

H	T	O
	9	97
—	5	48

2.

H	T	O
	6	48
—	3	29

3.

H	T	O
	6	33
—	2	14

4.

H	T	O
	2	17
—	2	09

5.

H	T	O
	4	65
—	1	19

6.

H	T	O
	3	19
—	2	08

Name \_\_\_\_\_

## Practicing Subtraction (continued)

Subtract. Draw or use models if you like.

7.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
2	3	8
-	9	5

8.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
5	1	9
-	1	7

9.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
5	7	7
-	2	4

10.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
9	9	9
-	9	0

11.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
1	1	1
-	2	9

12.

H	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>
7	9	3
-	4	7

Write in vertical form. Subtract.

13.  $419 - 277$

\_\_\_\_\_

14.  $222 - 171$

\_\_\_\_\_

15.  $352 - 56$

\_\_\_\_\_

16. Eamon helped ice cupcakes for the school bake sale. He used chocolate icing for 172 cupcakes and vanilla icing for 169 cupcakes. How many more chocolate cupcakes than vanilla did Eamon have?

\_\_\_\_\_

Name \_\_\_\_\_

## Estimating to Check Answers

### Example

- ① Solve the problem.  
524 people visited the park.  
340 other people visited the zoo.  
How many more people visited the park?



You can estimate to see if your answer is reasonable.

$$\begin{array}{r} 412 \\ 524 \\ - 340 \\ \hline 184 \end{array}$$

- ② Estimate to check your answer.  
524 is closer to 500.  
340 is closer to 300.



184 is close to 200.

$$\begin{array}{r} 500 \\ - 300 \\ \hline 200 \end{array}$$

- ③ Write your answer.

184 people

Solve the problem.

Estimate to check your answer.

Write the answer.

1. Mary read 676 pages.  
Phil read 411 pages.  
How many more pages did Mary read?

265 pages

Solve

\_\_\_\_\_

Check

\_\_\_\_\_

Name \_\_\_\_\_

### **Estimating to Check Answers** (continued)

Solve the problem.

Estimate to check your answer.

Write the answer.

2.	Jill drove 333 miles. Sam drove 495 miles. How many miles did they drive in all?  _____ miles	<u>Solve</u>     $+$ _____	<u>Check</u>     $+$ _____
----	--------------------------------------------------------------------------------------------------------------	----------------------------------------------	----------------------------------------------

3.	Steve collected 192 rocks. Luisa collected 332 rocks. How many rocks did they collect in all?  _____ rocks	<u>Solve</u>     $+$ _____	<u>Check</u>     $+$ _____
----	---------------------------------------------------------------------------------------------------------------------------	----------------------------------------------	----------------------------------------------

4.	842 people ran in the race. 291 people watched the race. How many more people ran than watched the race?  _____ people	<u>Solve</u>     $-$ _____	<u>Check</u>     $-$ _____
----	---------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------	----------------------------------------------

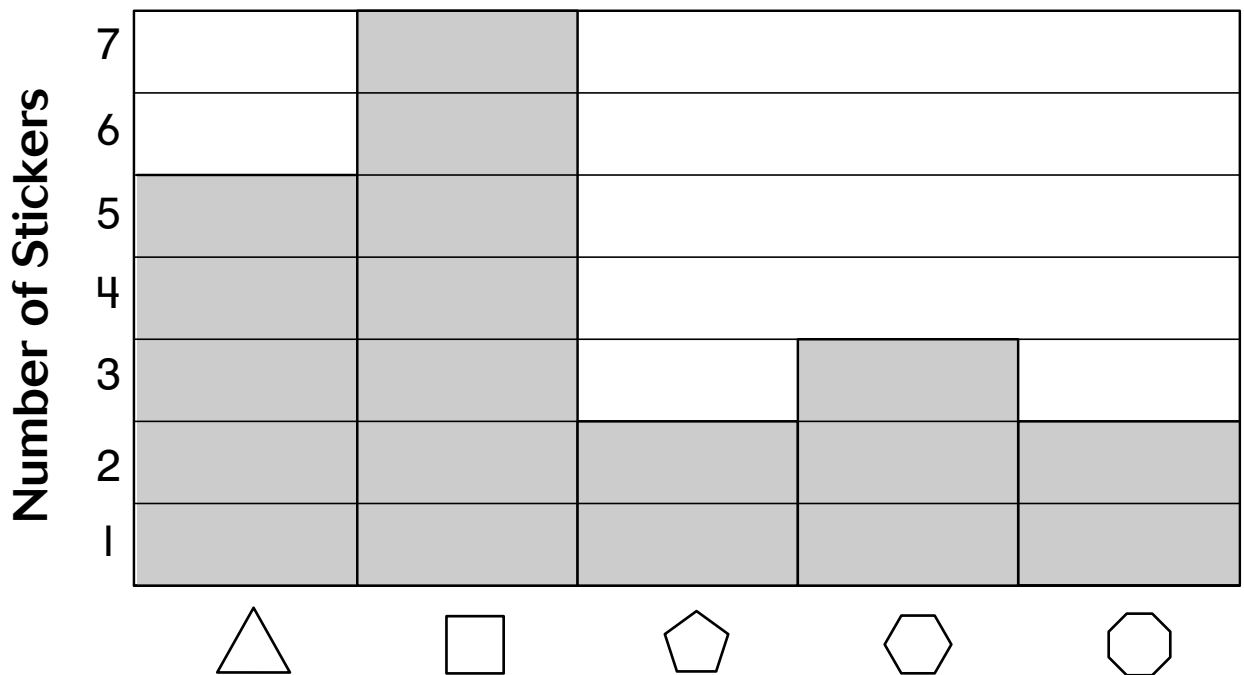


Name \_\_\_\_\_

## Corners and Sides

### Example

Paula collects stickers. She made a graph to show how many of each sticker she has. Use the graph to answer the questions.



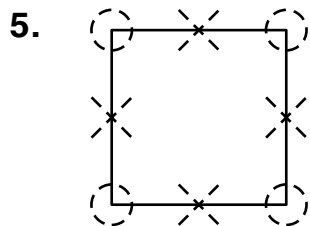
How many stickers have exactly four sides? 7

1. How many stickers have exactly five corners? \_\_\_\_
2. How many stickers have more than three sides? \_\_\_\_
3. How many stickers have fewer than six corners? \_\_\_\_
4. How many stickers have three sides or more? \_\_\_\_

Name \_\_\_\_\_

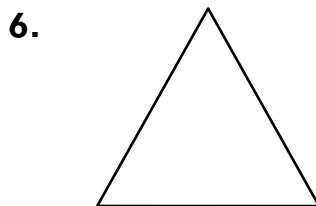
### **Corners and Sides** (continued)

Circle each corner. Put an X on each side. Write the number.



4 corners

4 sides



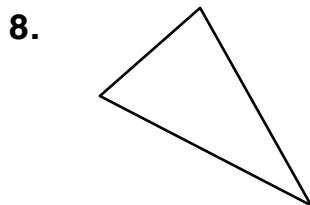
\_\_\_\_\_ corners

\_\_\_\_\_ sides



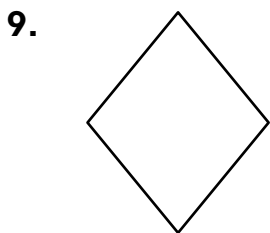
\_\_\_\_\_ corners

\_\_\_\_\_ sides



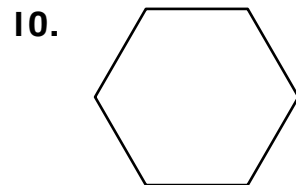
\_\_\_\_\_ corners

\_\_\_\_\_ sides



\_\_\_\_\_ corners

\_\_\_\_\_ sides



\_\_\_\_\_ corners

\_\_\_\_\_ sides

Name \_\_\_\_\_

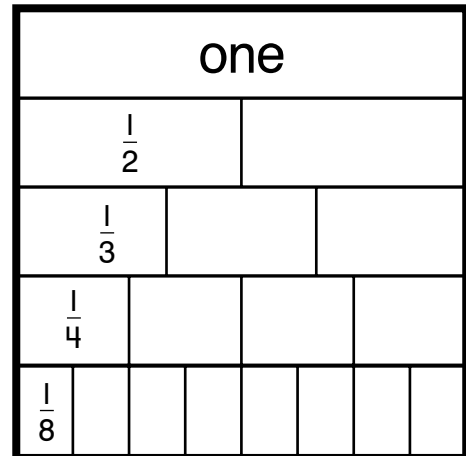
## Compare Unit Fractions

### Example

Write  $>$  or  $<$ .

$$\frac{1}{3} \bigcirc \frac{1}{4}$$

$\frac{1}{3}$  is greater than  $\frac{1}{4}$



Use your fraction strips.

Write  $>$  or  $<$ .

1.  $\frac{1}{2} \bigcirc \frac{1}{8}$

2.  $\frac{1}{8} \bigcirc \frac{1}{3}$

3.  $\frac{1}{4} \bigcirc \frac{1}{2}$

4.  $\frac{1}{8} \bigcirc \frac{1}{4}$

5.  $\frac{1}{3} \bigcirc \text{one}$

6.  $\frac{1}{3} \bigcirc \frac{1}{4}$

7.  $\frac{1}{8} \bigcirc \text{one}$

8.  $\frac{1}{4} \bigcirc \frac{1}{3}$

9.  $\frac{1}{2} \bigcirc \frac{1}{3}$

10.  $\text{one} \bigcirc \frac{1}{2}$

11.  $\frac{1}{3} \bigcirc \frac{1}{8}$

12.  $\frac{1}{8} \bigcirc \frac{1}{2}$

13. Circle the fractions that are greater than  $\frac{1}{4}$ .

$\frac{1}{8}$        $\frac{1}{4}$        $\frac{1}{3}$        $\frac{1}{2}$

Name \_\_\_\_\_

### Compare Unit Fractions (continued)

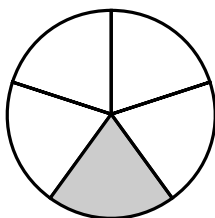
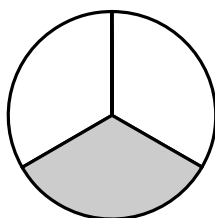
Write the fraction that tells how much is shaded.  
For each pair, circle the fraction that is greater.

14.

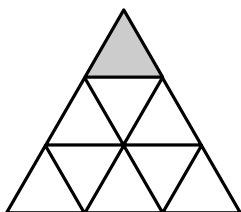
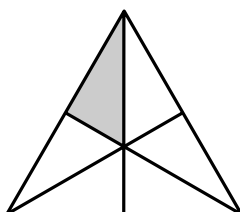

$$\frac{\square}{\square}$$

$$\frac{\square}{\square}$$

15.


$$\frac{\square}{\square}$$

$$\frac{\square}{\square}$$

16.


$$\frac{\square}{\square}$$

$$\frac{\square}{\square}$$

Name \_\_\_\_\_

## Working with Fractions

### Example

Circle the fraction that names the shaded part.



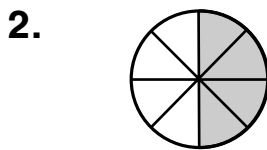
4 of 5 equal parts  
four-fifths

$$\frac{3}{5} \quad \frac{4}{5} \quad \frac{4}{6}$$

Circle the fraction that names the shaded part.



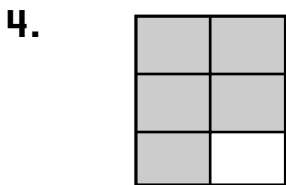
$$\frac{5}{6} \quad \frac{5}{7} \quad \frac{6}{7}$$



$$\frac{3}{8} \quad \frac{4}{9} \quad \frac{4}{8}$$



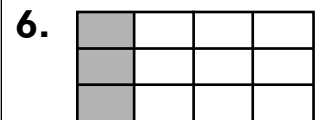
$$\frac{2}{5} \quad \frac{3}{5} \quad \frac{3}{6}$$



$$\frac{1}{4} \quad \frac{5}{8} \quad \frac{5}{6}$$



$$\frac{3}{6} \quad \frac{4}{6} \quad \frac{4}{7}$$



$$\frac{3}{12} \quad \frac{3}{9} \quad \frac{3}{4}$$

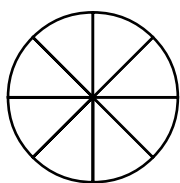
Name \_\_\_\_\_

### Working with Fractions (continued)

Color to show the number of shaded parts.

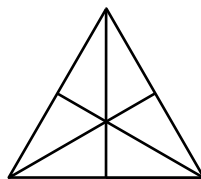
Write the fraction that names the shaded parts.

7. 3 shaded parts



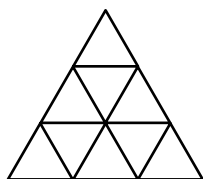
\_\_\_\_\_

8. 5 shaded parts



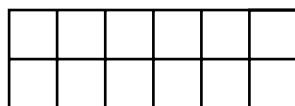
\_\_\_\_\_

9. 4 shaded parts



\_\_\_\_\_

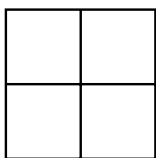
10. 7 shaded parts



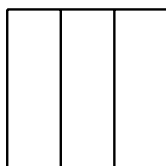
\_\_\_\_\_

11. Color each square to show the fraction. Circle the fractions that show the same amount of colored space.

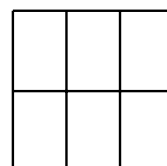
$$\frac{1}{4}$$



$$\frac{1}{3}$$



$$\frac{2}{6}$$



Name \_\_\_\_\_

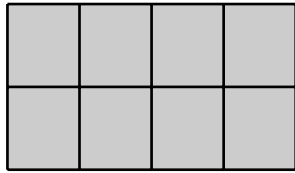
## Fractions Equal to One

---

### Example

Color to show 1 whole.

Write the fraction that equals 1 whole.

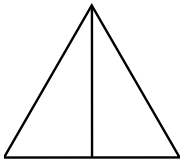


$$\frac{8}{8} = 1$$

Color to show 1 whole.

Write the fraction that equals 1 whole.

1.



$$\frac{\square}{\square} = 1$$

2.



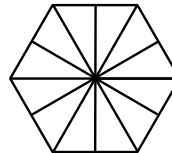
$$\frac{\square}{\square} = 1$$

3.



$$\frac{\square}{\square} = 1$$

4.



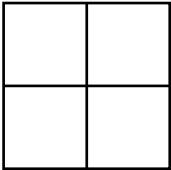
$$\frac{\square}{\square} = 1$$

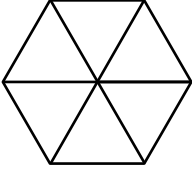
Name \_\_\_\_\_

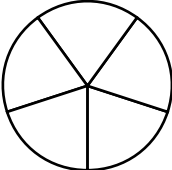
### Fractions Equal to One (continued)

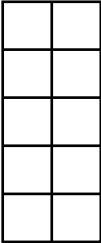
Color to show 1 whole.

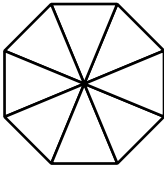
Write the fraction that equals 1 whole.

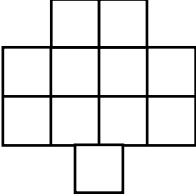
5.   $\frac{\square}{\square} = 1$

6.   $\frac{\square}{\square} = 1$

7.   $\frac{\square}{\square} = 1$

8.   $\frac{\square}{\square} = 1$

9.   $\frac{\square}{\square} = 1$

10.   $\frac{\square}{\square} = 1$

11. If a circle were cut into 50 equal parts, what fraction of it would equal one whole? Explain.

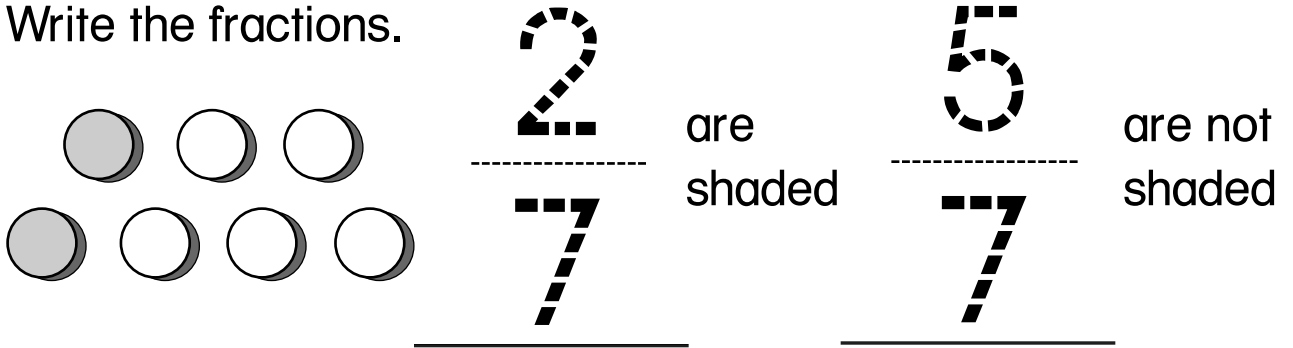


Name \_\_\_\_\_

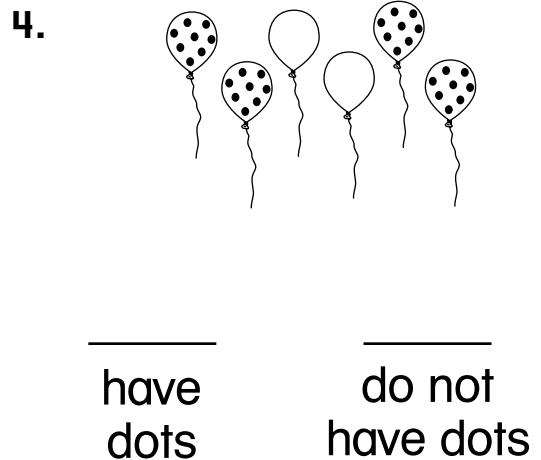
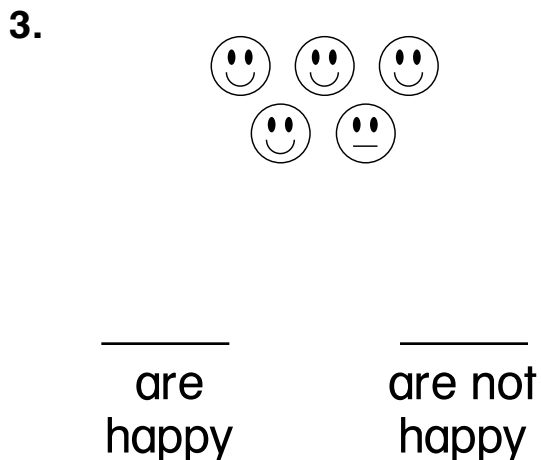
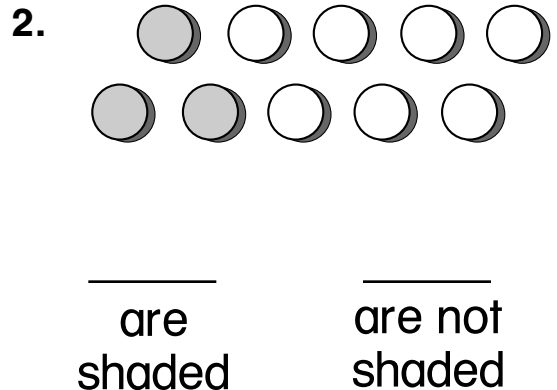
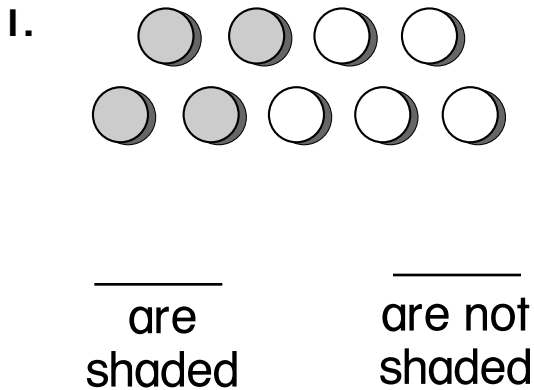
## Fractions of a Group

### Example

Write the fractions.



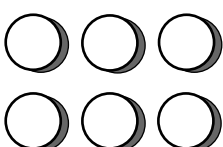
Write the fractions.

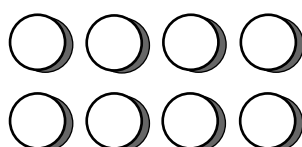



Name \_\_\_\_\_

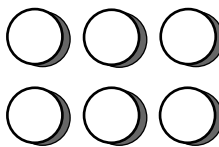
**Fractions of a Group** (continued)

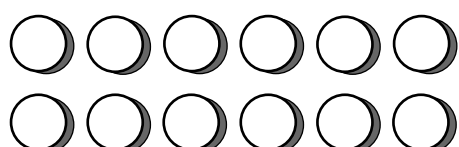
Circle part of each group to show the fraction.

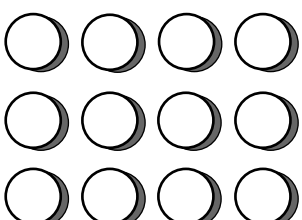
5.  $\frac{1}{3}$  

6.  $\frac{1}{2}$  

7.  $\frac{1}{4}$  

8.  $\frac{2}{3}$  

9.  $\frac{5}{6}$  

10.  $\frac{3}{4}$  

Name \_\_\_\_\_

## Recording Data from a Survey

---

### Example

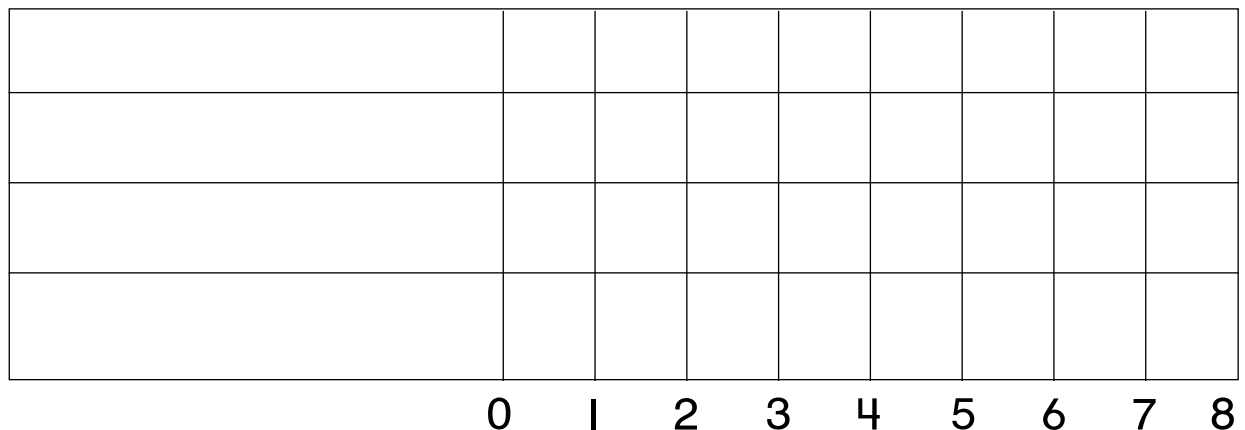
Take a survey. First, write four activities on the chart.  
Then ask classmates which activity they like best.  
Tally the answers. Then write the total.

#### Activities

Activity	Tally	Total

- 
1. Make a bar graph.  
Color one box for each time an activity was chosen.

#### Activity



Name \_\_\_\_\_

## Recording Data from a Survey (continued)

Tallies are made in groups of 5. Count by 5s to get the number of tallies.

$$\text{|||||} \text{ ||} = 7$$

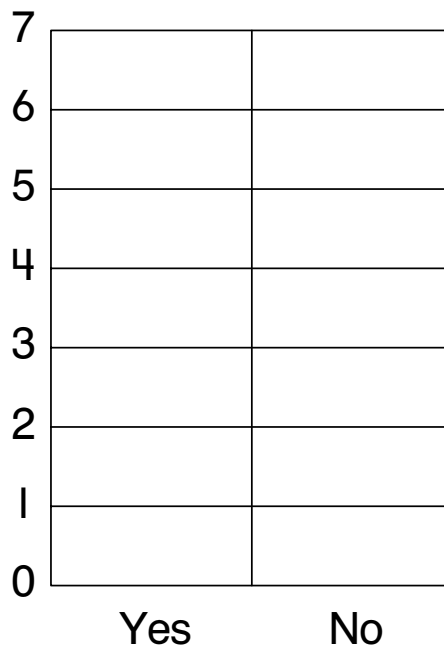


2. Andrea asks 10 classmates if they like football. She makes a tally mark to show each answer. Fill in the totals for those who like and dislike football.

### Who Likes Football?

Answer	Tally	Total
Yes		
No		

3. Make a bar graph to show how many children like football. Color one box for every child who likes football. Then use a different color and color one box for every child who does NOT like football.



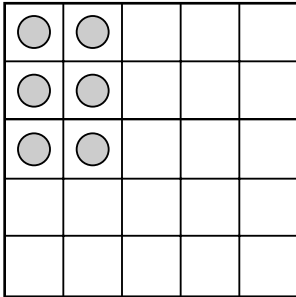
Name \_\_\_\_\_

## Using Arrays

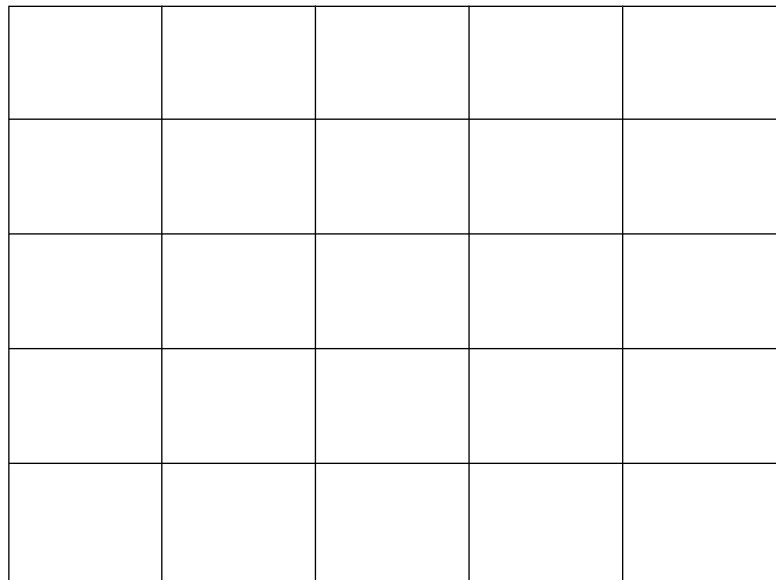
---

Use counters and the grid to show each fact.

### Example



$$\begin{array}{ccccccc} 3 & \times & 2 & = & \underline{6} \\ \text{rows} & & \text{in each} & & \text{in all} \\ & & \text{row} & & \end{array}$$



1.  $\begin{array}{ccccccc} 2 & \times & 2 & = & \underline{\quad} \\ \text{rows} & & \text{in each} & & \text{in all} \\ & & \text{row} & & \end{array}$

2.  $\begin{array}{ccccccc} 2 & \times & 4 & = & \underline{\quad} \\ \text{rows} & & \text{in each} & & \text{in all} \\ & & \text{row} & & \end{array}$

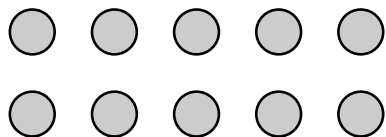
3.  $\begin{array}{ccccccc} 3 & \times & 5 & = & \underline{\quad} \\ \text{rows} & & \text{in each} & & \text{in all} \\ & & \text{row} & & \end{array}$

4.  $\begin{array}{ccccccc} 3 & \times & 4 & = & \underline{\quad} \\ \text{rows} & & \text{in each} & & \text{in all} \\ & & \text{row} & & \end{array}$

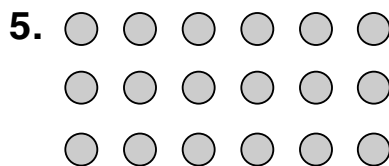
Name \_\_\_\_\_

### Using Arrays (continued)

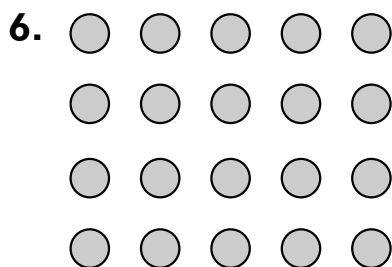
Write each multiplication fact.



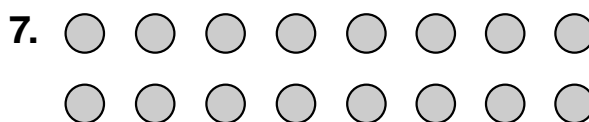
$$\begin{array}{r} 2 \\ \hline \text{rows} \end{array} \times \begin{array}{r} 5 \\ \hline \text{in each} \\ \text{row} \end{array} = \begin{array}{r} 10 \\ \hline \text{in all} \end{array}$$



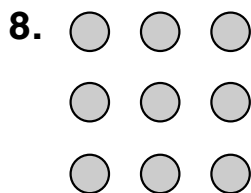
$$\begin{array}{r} \phantom{00} \\ \hline \text{rows} \end{array} \times \begin{array}{r} \phantom{00} \\ \hline \text{in each} \\ \text{row} \end{array} = \begin{array}{r} \phantom{00} \\ \hline \text{in all} \end{array}$$



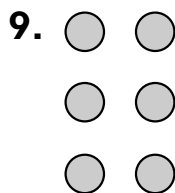
$$\begin{array}{r} \phantom{00} \\ \hline \text{rows} \end{array} \times \begin{array}{r} \phantom{00} \\ \hline \text{in each} \\ \text{row} \end{array} = \begin{array}{r} \phantom{00} \\ \hline \text{in all} \end{array}$$



$$\begin{array}{r} \phantom{00} \\ \hline \text{rows} \end{array} \times \begin{array}{r} \phantom{00} \\ \hline \text{in each} \\ \text{row} \end{array} = \begin{array}{r} \phantom{00} \\ \hline \text{in all} \end{array}$$



$$\begin{array}{r} \phantom{00} \\ \hline \text{rows} \end{array} \times \begin{array}{r} \phantom{00} \\ \hline \text{in each} \\ \text{row} \end{array} = \begin{array}{r} \phantom{00} \\ \hline \text{in all} \end{array}$$



$$\begin{array}{r} \phantom{00} \\ \hline \text{rows} \end{array} \times \begin{array}{r} \phantom{00} \\ \hline \text{in each} \\ \text{row} \end{array} = \begin{array}{r} \phantom{00} \\ \hline \text{in all} \end{array}$$

Name \_\_\_\_\_

## Multiplying Across and Down

### Example

You can multiply across or down.

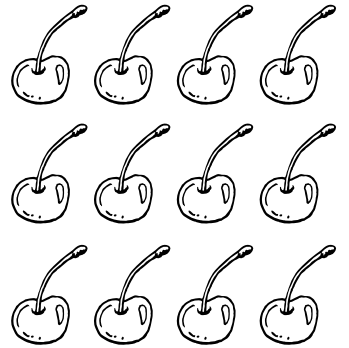
Find each product.

3 groups of cherries.

4 cherries in each group.

$$3 \times 4 = \underline{12}$$

$$\begin{array}{r} 4 \\ \times 3 \\ \hline 12 \end{array}$$



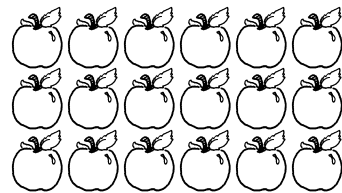
1. 3 groups of 2



$$\begin{array}{r} 2 \\ \times 3 \\ \hline \end{array}$$

$$3 \times 2 = \underline{\quad}$$

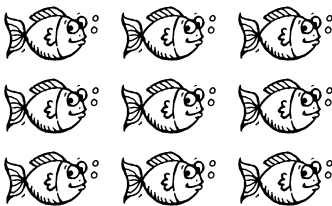
2. 3 groups of 6



$$\begin{array}{r} 6 \\ \times 3 \\ \hline \end{array}$$

$$3 \times 6 = \underline{\quad}$$

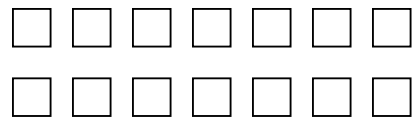
3. 3 groups of 3



$$\begin{array}{r} 3 \\ \times 3 \\ \hline \end{array}$$

$$3 \times 3 = \underline{\quad}$$

4. 2 groups of 7



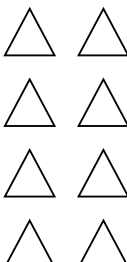
$$\begin{array}{r} 7 \\ \times 2 \\ \hline \end{array}$$

$$2 \times 7 = \underline{\quad}$$

Name \_\_\_\_\_

# **Multiplying Across and Down** (continued)

Multiply across and down. Write the number.



$\times$

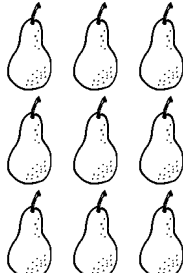
2

4

8

$\underline{4} \times \underline{2} = \underline{8}$


5.



$\times$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

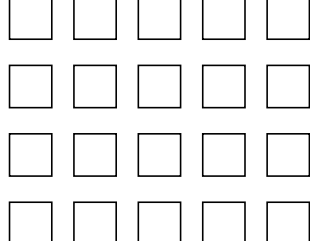
6.



$\times$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$


7.



$\times$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$


8.



$\times$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

9.



$\times$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$



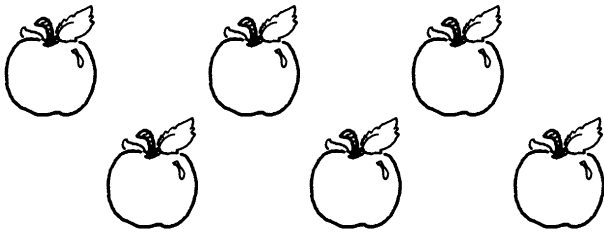
Name \_\_\_\_\_

## Multiplying by 2

---

Find each product. Think of doubling to help.

### Example



$2 \times 3$  is double 3.

$$2 \times 3 = \underline{6}$$

---

Find each product. Think of doubling to help.

1.  $2 \times 1 =$  \_\_\_\_\_  $2 \times 6 =$  \_\_\_\_\_

$2 \times 2 =$  \_\_\_\_\_  $2 \times 7 =$  \_\_\_\_\_

$2 \times 3 =$  \_\_\_\_\_  $2 \times 8 =$  \_\_\_\_\_

$2 \times 4 =$  \_\_\_\_\_  $2 \times 9 =$  \_\_\_\_\_

$2 \times 5 =$  \_\_\_\_\_  $2 \times 10 =$  \_\_\_\_\_

---

2. Could 9 ever be the product of 2 and another number? Explain.

---

---

Name \_\_\_\_\_

### **Multiplying by 2** (continued)

Find each product.

Think of doubling to help.

3. 
$$\begin{array}{r} 2 \\ \times 8 \\ \hline 16 \end{array}$$

4. 
$$\begin{array}{r} 1 \\ \times 2 \\ \hline \end{array}$$
 
$$\begin{array}{r} 2 \\ \times 3 \\ \hline \end{array}$$
 
$$\begin{array}{r} 7 \\ \times 2 \\ \hline \end{array}$$
 
$$\begin{array}{r} 10 \\ \times 2 \\ \hline \end{array}$$
 
$$\begin{array}{r} 2 \\ \times 8 \\ \hline \end{array}$$
 
$$\begin{array}{r} 2 \\ \times 4 \\ \hline \end{array}$$

Complete each fact.

Find the missing factor.

5.  $2 \times \underline{\hspace{2cm}} = 20$

6.  $\underline{\hspace{2cm}} \times 2 = 8$

7.  $\underline{\hspace{2cm}} \times 2 = 12$

8.  $2 \times \underline{\hspace{2cm}} = 18$

9.  $\underline{\hspace{2cm}} \times 2 = 16$

10.  $\underline{\hspace{2cm}} \times 2 = 14$

Solve the problem.

11. Ann wanted to wear 6 bracelets on each arm. How many bracelets did she need in all?

\_\_\_\_\_ bracelets

Name \_\_\_\_\_

## Multiplying by 5

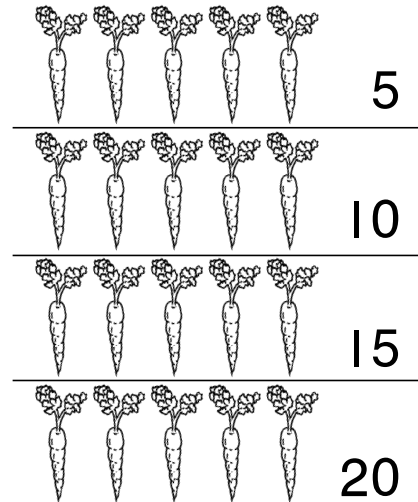
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### Example

4 rabbits are eating carrots.  
Each rabbit has 5 carrots.  
How many carrots do they  
have in all?

There are 20 carrots in all.

$$4 \times 5 = \underline{20}$$



Find each product.

1.  $1 \times 5 =$  \_\_\_\_\_

$6 \times 5 =$  \_\_\_\_\_

$2 \times 5 =$  \_\_\_\_\_

$7 \times 5 =$  \_\_\_\_\_

$3 \times 5 =$  \_\_\_\_\_

$8 \times 5 =$  \_\_\_\_\_

$4 \times 5 =$  \_\_\_\_\_

$9 \times 5 =$  \_\_\_\_\_

$5 \times 5 =$  \_\_\_\_\_

$10 \times 5 =$  \_\_\_\_\_

- 
2. How are the products you get when you multiply by 5 like the numbers you say when you skip count by 5?
- \_\_\_\_\_

Name \_\_\_\_\_

### **Multiplying by 5** (continued)

Find each product.

3. 
$$\begin{array}{r} 5 \\ \times 2 \\ \hline \end{array}$$
 
$$\begin{array}{r} 5 \\ \times 10 \\ \hline \end{array}$$
 
$$\begin{array}{r} 7 \\ \times 5 \\ \hline \end{array}$$
 
$$\begin{array}{r} 4 \\ \times 5 \\ \hline \end{array}$$
 
$$\begin{array}{r} 5 \\ \times 9 \\ \hline \end{array}$$
 
$$\begin{array}{r} 3 \\ \times 5 \\ \hline \end{array}$$

10

4. 
$$\begin{array}{r} 9 \\ \times 5 \\ \hline \end{array}$$
 
$$\begin{array}{r} 1 \\ \times 5 \\ \hline \end{array}$$
 
$$\begin{array}{r} 5 \\ \times 7 \\ \hline \end{array}$$
 
$$\begin{array}{r} 5 \\ \times 8 \\ \hline \end{array}$$
 
$$\begin{array}{r} 5 \\ \times 3 \\ \hline \end{array}$$
 
$$\begin{array}{r} 10 \\ \times 5 \\ \hline \end{array}$$

Complete each fact.

Find the missing factor.

5.  $7 \times \underline{\hspace{2cm}} = 35$

6.  $5 \times \underline{\hspace{2cm}} = 5$

7.  $\underline{\hspace{2cm}} \times 5 = 25$

8.  $5 \times \underline{\hspace{2cm}} = 30$

9.  $5 \times \underline{\hspace{2cm}} = 45$

10.  $\underline{\hspace{2cm}} \times 5 = 15$

### **Math Reasoning**

11. How can you use  $6 \times 5$  to help you find  $7 \times 5$ ?

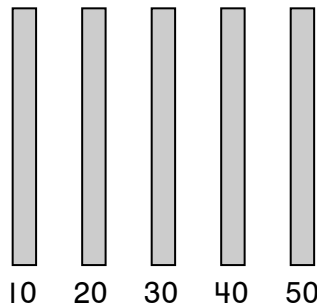
Name \_\_\_\_\_

## Multiplying by 10

---

### Example

Find each product. You can skip count or use a fact you know to find the product.



#### Use a Fact You Know

$$5 \times 1 = 5$$

$$5 \times 1 \text{ ten} = 5 \text{ tens}$$

$$5 \times 10 = 50$$

1.  $1 \times 10 =$  10

$$6 \times 10 = \underline{\hspace{2cm}}$$

$$2 \times 10 = \underline{\hspace{2cm}}$$

$$7 \times 10 = \underline{\hspace{2cm}}$$

$$3 \times 10 = \underline{\hspace{2cm}}$$

$$8 \times 10 = \underline{\hspace{2cm}}$$

$$4 \times 10 = \underline{\hspace{2cm}}$$

$$9 \times 10 = \underline{\hspace{2cm}}$$

$$5 \times 10 = \underline{\hspace{2cm}}$$

$$10 \times 10 = \underline{\hspace{2cm}}$$

2. How are the number you multiply by 10 and the number in tens place of the product alike?
- \_\_\_\_\_

Name \_\_\_\_\_

### **Multiplying by 10** (continued)

Find each product.

3. 
$$\begin{array}{r} 6 \\ \times 10 \\ \hline \end{array}$$
 
$$\begin{array}{r} 10 \\ \times 3 \\ \hline \end{array}$$
 
$$\begin{array}{r} 10 \\ \times 10 \\ \hline \end{array}$$
 
$$\begin{array}{r} 1 \\ \times 10 \\ \hline \end{array}$$
 
$$\begin{array}{r} 10 \\ \times 5 \\ \hline \end{array}$$
 
$$\begin{array}{r} 10 \\ \times 8 \\ \hline \end{array}$$

60

4. 
$$\begin{array}{r} 10 \\ \times 7 \\ \hline \end{array}$$
 
$$\begin{array}{r} 10 \\ \times 4 \\ \hline \end{array}$$
 
$$\begin{array}{r} 10 \\ \times 1 \\ \hline \end{array}$$
 
$$\begin{array}{r} 10 \\ \times 2 \\ \hline \end{array}$$
 
$$\begin{array}{r} 5 \\ \times 10 \\ \hline \end{array}$$
 
$$\begin{array}{r} 10 \\ \times 6 \\ \hline \end{array}$$

Complete the table. Follow the rule.

5.

Multiply by 5	
In	Out
4	
5	
6	
7	
8	

6.

Multiply by 10	
In	Out
4	
5	
6	
7	
8	

Name \_\_\_\_\_

## Modeling Division

---

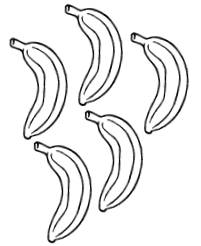
Make equal groups.

Write the number in each group.

### Example

Two children have 10 bananas. They want to share the bananas equally. How many bananas should each child get?

Each child should get 5 bananas.



	Number in All	Number of Groups	Number in Each Group
1.	10	2	5
2.	6	3	
3.	18	6	
4.	8	2	
5.	12	3	

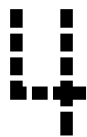
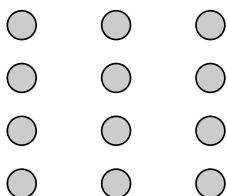
Name \_\_\_\_\_

**Modeling Division** (continued)

Circle equal groups.

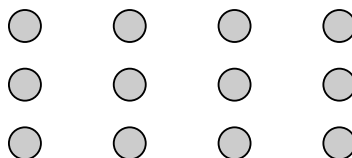
Write the number in each group.

6.



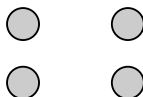
3 groups of \_\_\_\_\_

7.



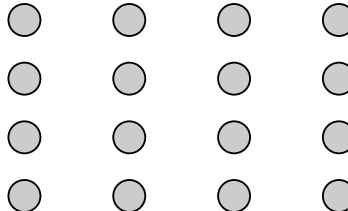
4 groups of \_\_\_\_\_

8.



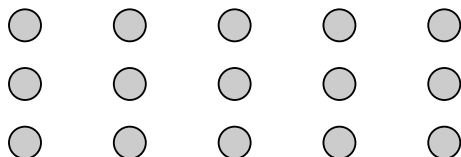
2 groups of \_\_\_\_\_

9.



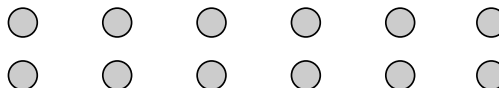
4 groups of \_\_\_\_\_

10.



5 groups of \_\_\_\_\_

11.



6 groups of \_\_\_\_\_



Name \_\_\_\_\_

## Division as Repeated Subtraction

### Example

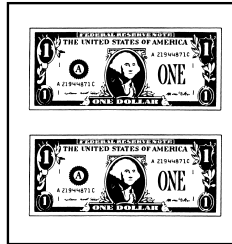
Subtract equal groups to solve.

Rob has \$10. Each day, he buys lunch at school for \$2. How many days can he keep buying lunch at school?



Day 1

$$10 - 2 = 8$$



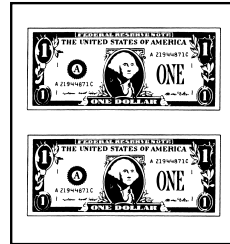
Day 2

$$8 - 2 = 6$$



Day 3

$$6 - 2 = 4$$



Day 4

$$4 - 2 = 2$$



Day 5

$$2 - 2 = 0$$

Rob can buy lunch at school for 5 days.

Subtract equal groups to solve.

1. Sally has 12 tickets for rides at the park. Each ride costs 4 tickets. How many rides can Sally go on?



Sally can go on \_\_\_\_\_ rides.



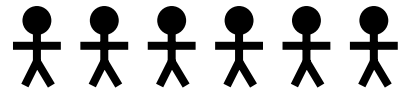
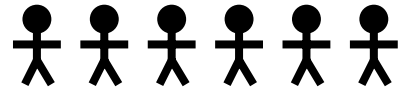
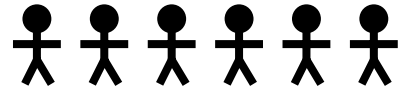
Name \_\_\_\_\_

**Division as Repeated Subtraction** (continued)

Subtract equal groups to solve.

2. 18 children are going to ride the train. 6 children will fit in each car. How many train cars will they need?

They will need \_\_\_\_\_ train cars.



Use counters. Subtract equal groups to solve.

Draw to show what you did.

3. Mrs. Smith has 20 pillows. She has 5 beds and wants to place the same number of pillows on each bed. How many pillows will she place on each bed?



She can place \_\_\_\_\_ pillows on each bed.

4. Mr. Ben has 15 sheets of paper. Each day he hands out 5 sheets of paper. How many days can he hand out paper?



He can hand out paper for \_\_\_\_\_ days.

Name \_\_\_\_\_

## Division with Remainders

---

### Example

Circle groups to solve. Write how many are left over.

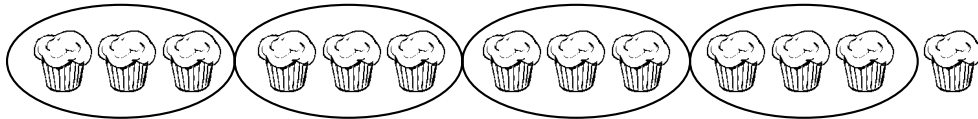
13 cupcakes are put on 4 plates. The same number of cupcakes is on each plate.

How many cupcakes are on each plate?

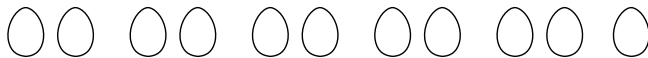
3

How many cupcakes are left?

1



- 
1. Lisa has 11 eggs. It takes 2 eggs to make an omelet. How many omelets can Lisa make?



Lisa can make \_\_\_\_\_ omelets.

How many eggs are left over? \_\_\_\_\_ left over.

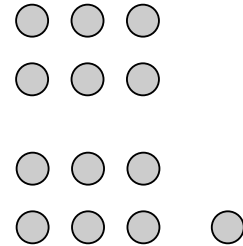
Name \_\_\_\_\_

**Division with Remainders** (continued)

Use counters to solve.

Draw to show what you did.

2. Tom has 13 marbles. He can put 6 marbles in each bag. How many bags can he fill?

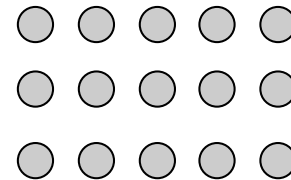


Tom can fill \_\_\_\_\_ bags.

How many marbles are left over? \_\_\_\_\_ left over.

---

3. Lara has 15 beads to use for making necklaces. She puts 4 beads on each necklace. How many necklaces can she make?

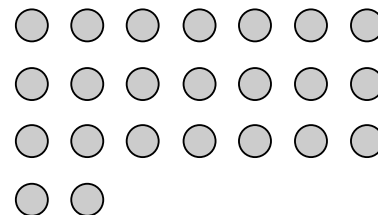


Lara can make \_\_\_\_\_ necklaces.

How many beads are left over? \_\_\_\_\_ left over.

---

4. Jay has 23 beans. He can put 7 beans in each bowl. How many bowls can he fill?



Jay can fill \_\_\_\_\_ bowls.

How many beans are left over? \_\_\_\_\_ left over.

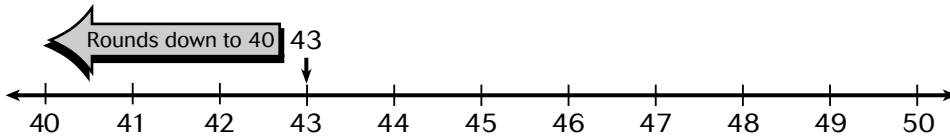
Name \_\_\_\_\_

## Rounding to the Nearest Ten and Hundred

---

### Example 1

Round 43, 45, and 48 to the nearest ten.



43 is closer to 40 than to 50. 43 rounds down to 40.

45 is halfway between 40 and 50. If a number is halfway between 2 tens, you round up. 45 rounds up to 50.

48 is closer to 50 than to 40. 48 rounds up to 50.

### Example 2

Round 839 to the nearest hundred.

The hundreds digit is 8.

Look at the digit to the right of the hundreds place.    839

Since 3 is less than 5, round down. 839 rounds to 800.

---

Round to the nearest ten.

**1.** 68

\_\_\_\_\_

**2.** 14

\_\_\_\_\_

**3.** 21

\_\_\_\_\_

**4.** 35

\_\_\_\_\_

**5.** 91

\_\_\_\_\_

**6.** 86

\_\_\_\_\_

**7.** 47

\_\_\_\_\_

**8.** 52

\_\_\_\_\_

Round to the nearest hundred.

**9.** 761

\_\_\_\_\_

**10.** 125

\_\_\_\_\_

**11.** 910

\_\_\_\_\_

**12.** 559

\_\_\_\_\_

**13.** 609

\_\_\_\_\_

**14.** 583

\_\_\_\_\_

**15.** 445

\_\_\_\_\_

**16.** 850

\_\_\_\_\_

Name \_\_\_\_\_

### **Rounding to the Nearest Ten and Hundred** (continued)

Round to the nearest ten.

**17.** 54

\_\_\_\_\_

**18.** 37

\_\_\_\_\_

**19.** 81

\_\_\_\_\_

**20.** 65

\_\_\_\_\_

Round to the nearest hundred.

**21.** 609

\_\_\_\_\_

**22.** 351

\_\_\_\_\_

**23.** 491

\_\_\_\_\_

**24.** 850

\_\_\_\_\_

**25. Math Reasoning** Round 549 to the nearest hundred and round 551 to the nearest hundred. Do you get the same answers? Explain.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**26.** A rancher has 43 cattle in his herd. To the nearest ten, how many cattle are in his herd?

\_\_\_\_\_

**27.** A new computer costs \$876. To the nearest hundred, how many dollars does it cost?

\_\_\_\_\_

**28.** Rachel has 65 coins in her coin collection. To the nearest ten, how many coins does she have?

\_\_\_\_\_

**29.** Round 98 to the nearest ten.

\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**30.** Which of the following is 79 rounded to the nearest ten?

**A** 79

**B** 70

**C** 80

**D** 90

**E** NH

**31.** Clint has 384 baseball cards. To the nearest hundred, how many baseball cards does he have?

**F** 300

**G** 400

**H** 800

**J** 80

**K** NH

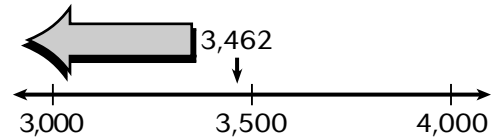
Name \_\_\_\_\_

## Rounding Larger Numbers

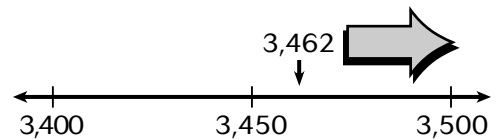
### Example

Round 3,462 to the nearest thousand, hundred, and ten.

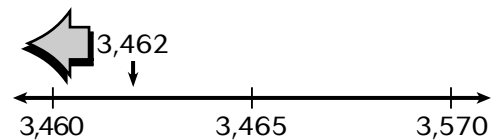
The digit to the right of the thousands place is 4. Since it is less than 5, round down. To the nearest thousand, 3,462 rounds to 3,000.



The digit to the right of the hundreds place is 6. Since it is 5 or greater, round up. To the nearest hundred, 3,462 rounds to 3,500.



The digit to the right of the tens place is 2. Since it is less than 5, round down. To the nearest ten, 3,462 rounds to 3,460.



Round each number to the nearest thousand, hundred, and ten.

**1.** 8,485

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**2.** 6,721

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**3.** 1,249

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**4.** 3,932

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**5.** 9,089

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**6.** 2,571

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**7.** 4,806

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**8.** 5,182

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Round each number to the nearest thousand.

**9.** 8,253

\_\_\_\_\_

**10.** 3,500

\_\_\_\_\_

**11.** 1,645

\_\_\_\_\_

**12.** 5,069

\_\_\_\_\_

Name \_\_\_\_\_

### **Rounding Larger Numbers** (continued)

Round each number to the nearest hundred.

**13.** 7,945

\_\_\_\_\_

**14.** 1,093

\_\_\_\_\_

**15.** 8,329

\_\_\_\_\_

**16.** 2,195

\_\_\_\_\_

Round each number to the nearest ten.

**17.** 5,708

\_\_\_\_\_

**18.** 3,761

\_\_\_\_\_

**19.** 6,183

\_\_\_\_\_

**20.** 9,716

\_\_\_\_\_

**21. Math Reasoning** When rounding to the nearest thousand, what is the least number that rounds to 3000? \_\_\_\_\_

**22. Math Reasoning** When rounding to the nearest thousand, what is the greatest number that rounds to 5000? \_\_\_\_\_

**23.** A department store sold 1,347 pairs of shoes during the month of August. To the nearest ten, how many pairs of shoes did the store sell? \_\_\_\_\_

**24.** An elementary school held a reading challenge, and its students read 3,612 books. To the nearest thousand, how many books did the students read? \_\_\_\_\_

**25.** A used car costs \$8,756. To the nearest hundred, how much does the car cost? \_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**26.** Which of the following shows the number 5,649 rounded to the nearest hundred?

**A** 5,650

**B** 6,000

**C** 5,600

**D** 5,700

**E** NH

**27.** Which of the following shows the number 8,721 rounded to the nearest thousand?

**F** 8,700

**G** 9,000

**H** 8,720

**J** 8,000

**K** NH



Name \_\_\_\_\_

## Comparing and Ordering Numbers

---

### Example

Order these numbers from **least** to **greatest**.

2,457      2,491      1,245

Write the numbers with the ones digits lined up. Then compare the numbers digit by digit starting with the greatest place value.

Compare the thousands.

2,457      Since 1 thousands is less than 2 thousands, 1,245 is  
2,491      the least number.  
1,245

Compare the hundreds of the two other numbers.

2,457      The hundreds digits are the same, so we will  
            compare the tens digits.  
2,491      5 tens is less than 9 tens, so 2,491 is the greatest  
            number.

The order of the numbers from **least** to **greatest** is:

1,245      2,457      2,491

---

Compare. Write  $>$ ,  $<$ , or  $=$ .

1. 514  512

2. 394  349

3. 809  809

4. 1,078  178

5. 236  2,036

6. 7,530  7,240

7. 9,089  9,098

8. 4,517  5,417

9. 3,728  3,727

Write the numbers in order from **least** to **greatest**.

10. 428    418    422

11. 1,234    134    123

\_\_\_\_\_

Name \_\_\_\_\_

### Comparing and Ordering Numbers (continued)

Compare. Write  $>$ ,  $<$ , or  $=$ .

**12.**  $294 \bigcirc 2,094$       **13.**  $405 \bigcirc 450$       **14.**  $1,021 \bigcirc 1,012$

Write the numbers in order from **least** to **greatest**.

**15.** 5,619   5,691   569      **16.** 1,010   1,001   1,100

\_\_\_\_\_

**17. Math Reasoning** What is the largest digit that makes  $3,465 < 3,4\blacksquare 5$  true? \_\_\_\_\_

**18. Math Reasoning** What is the smallest digit that makes  $1,328 > 1,\blacksquare 28$  true? \_\_\_\_\_

**19.** Bob has 1,241 trading cards. Mark has 1,099 trading cards. Who has more cards? \_\_\_\_\_

**20.** Maria made 3,950 points playing a video game. Leigh made 3,590 points. Kathy made 3,905. Order their scores from least to greatest.

\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**21.** Which of the following makes the number statement  $2,457 \bigcirc 2,547$  true?

**A**  $>$       **B**  $<$       **C**  $=$       **D**  $+$

**22.** Missouri became a state in 1821, while California became a state in 1850, and Pennsylvania became a state in 1787. Which of the following shows the correct ordering of these dates, from earliest to latest?

**F** 1787, 1850, 1821      **H** 1787, 1821, 1850  
**G** 1850, 1821, 1787      **J** 1850, 1787, 1821

Name \_\_\_\_\_

## Extending Place-Value Concepts

---

### Example 1

Use the place value chart to find the value of each digit of the number 382,145.

hundred thousands	ten thousands	thousands	hundreds	tens	ones
3	8	2	1	4	5

The 3 is in the hundred thousands place, so its value is 300,000.

The 8 is in the ten thousands place, so its value is 80,000.

The 2 is in the thousands place, so its value is 2,000.

The 1 is in the hundreds place, so its value is 100.

The 4 is in the tens place, so its value is 40.

The 5 is in the ones place, so its value is 5.

### Example 2

Write 850,492 in expanded form.

First, find the value of each digit, then write 850,492 as the sum of the values.

So, the expanded form of 850,492 is  
 $800,000 + 50,000 + 400 + 90 + 2$ .

---

Write the value of the underlined digit.

1. 507,691

\_\_\_\_\_

2. 925,481

\_\_\_\_\_

3. 72,065

\_\_\_\_\_

4. 118,941

\_\_\_\_\_

5. 657,104

\_\_\_\_\_

6. 298,163

\_\_\_\_\_

7. 301,215

\_\_\_\_\_

8. 400,900

\_\_\_\_\_

Name \_\_\_\_\_

### Extending Place-Value Concepts (continued)

Write each number in expanded form.

9. 12,817

\_\_\_\_\_

10. 680,127

\_\_\_\_\_

11. **Algebra** What missing number would make the number sentence  $519,082 = \square + 10,000 + 9,000 + 80 + 2$  true? \_\_\_\_\_

12. Complete the pattern.  
295,000; 294,000; 293,000;  $\square$ ;  $\square$ ;  $\square$

\_\_\_\_\_

13. An internet website had 545,300 visitors in one day.  
If they have 100,000 additional visitors the next day,  
how many visitors did they have? \_\_\_\_\_

14. A brick manufacturer has 943,800 bricks in a warehouse.  
They brought in an additional 10,000 bricks. How many  
did they have in all? \_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

15. Which of the following is the correct value of the underlined digit of the number 263,471?

**A** 600,000    **B** 60,000    **C** 6,000    **D** 600    **E** NH

16. Which of the following is the correct expanded form for 375,020?

**F**  $300,000 + 70,000 + 5,000 + 20$

**G**  $30,000 + 7,000 + 500 + 20$

**H**  $300,000 + 7,000 + 500 + 20$

**J**  $300,000 + 70,000 + 500 + 20$

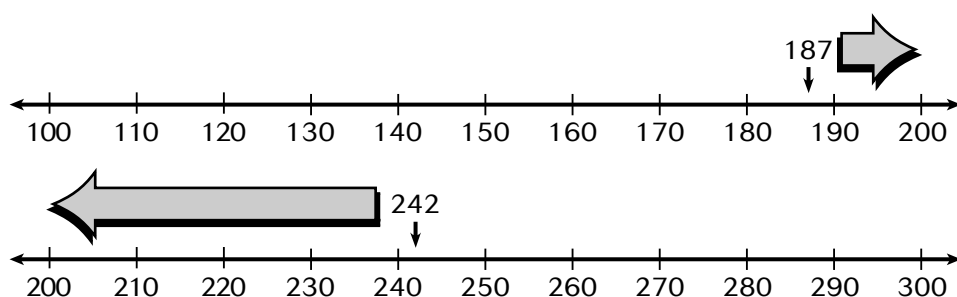
Name \_\_\_\_\_

## Estimating Sums

### Example

When Amy added 187 and 242, she got a sum of 429. To check that this answer is reasonable, use estimation.

Round 187 and 242 to the nearest hundred to get numbers you can add mentally.



Add the rounded numbers: 187 rounds to 200 and 242 rounds to 200. So,  $200 + 200 = 400$ .

The answer is reasonable because 429 is close to 400.

Estimate by rounding to the nearest ten.

**1.**  $71 + 36$

\_\_\_\_\_

**2.**  $24 + 81$

\_\_\_\_\_

**3.**  $43 + 91$

\_\_\_\_\_

**4.**  $54 + 66$

\_\_\_\_\_

Estimate by rounding to the nearest hundred.

**5.** 
$$\begin{array}{r} 367 \\ + 141 \\ \hline \end{array}$$

\_\_\_\_\_

**6.** 
$$\begin{array}{r} 791 \\ + 632 \\ \hline \end{array}$$

\_\_\_\_\_

**7.** 
$$\begin{array}{r} 506 \\ + 249 \\ \hline \end{array}$$

\_\_\_\_\_

**8.** 
$$\begin{array}{r} 458 \\ + 891 \\ \hline \end{array}$$

**9.**  $940 + 190$

\_\_\_\_\_

**10.**  $675 + 460$

\_\_\_\_\_

**11.**  $531 + 776$

\_\_\_\_\_

**12.**  $369 + 481$

\_\_\_\_\_

**13.**  $151 + 260$

\_\_\_\_\_

**14.**  $705 + 936$

\_\_\_\_\_

Name \_\_\_\_\_

### Estimating Sums (continued)

Estimate by rounding to the nearest ten.

<b>15.</b> $68 + 27$	<b>16.</b> $19 + 93$	<b>17.</b> $89 + 75$	<b>18.</b> $54 + 33$
_____	_____	_____	_____

Estimate by rounding to the nearest hundred.

<b>19.</b> $\begin{array}{r} 819 \\ + 342 \\ \hline \end{array}$	<b>20.</b> $\begin{array}{r} 159 \\ + 249 \\ \hline \end{array}$	<b>21.</b> $710 + 678$	<b>22.</b> $891 + 653$
		_____	_____

- 23.** Jaimee was a member of the school chorus for 3 years. Todd was a member of the school band for 2 years. The chorus has 43 members and the band has 85 members. About how many members do the two groups have together? \_\_\_\_\_

- 24. Math Reasoning** What is the largest number that can be added to 46 so that the sum is 70 when both numbers are rounded to the nearest ten? Explain.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

- 25.** Which of the following gives an estimate for  $79 + 82$  when rounded to the nearest ten?

**A** 140      **B** 170      **C** 150      **D** 160      **E** NH

- 26.** Charlie's dad bought a computer that cost \$928 and a printer that cost \$254. Rounded to the nearest hundred, which is the best estimate of the total cost?

**F** \$1,000      **G** \$1,300      **H** \$1,200      **J** \$1,100      **K** NH

Name \_\_\_\_\_

## Subtracting Two- and Three-Digit Numbers

---

### Example

Find  $369 - 187$ .

#### Step 1

Subtract the ones.  
Regroup as needed.

$$\begin{array}{r} 369 \\ - 187 \\ \hline 2 \end{array} \quad 9 - 7 = 2 \text{ ones.}$$

#### Step 2

Subtract the  
tens. Regroup  
as needed.

$$\begin{array}{r} 216 \\ \cancel{3}69 \\ - 187 \\ \hline 82 \end{array} \quad \begin{array}{l} \text{Regroup} \\ 3 \text{ hundreds} \\ 6 \text{ tens as} \\ 2 \text{ hundreds} \\ 16 \text{ tens.} \end{array}$$

#### Step 3

Subtract the hundreds.

$$\begin{array}{r} 216 \\ \cancel{3}69 \\ - 187 \\ \hline 182 \end{array}$$

$2 - 1 = 1$  hundreds.

$$16 - 8 = 8 \text{ tens.}$$

Check by using front-end estimation.  $300 - 100 = 200$ .

Since 200 is close to 182, the answer is reasonable.

---

**1.**  $\begin{array}{r} 87 \\ - 63 \\ \hline \end{array}$

**2.**  $\begin{array}{r} 74 \\ - 12 \\ \hline \end{array}$

**3.**  $\begin{array}{r} 61 \\ - 48 \\ \hline \end{array}$

**4.**  $\begin{array}{r} 37 \\ - 29 \\ \hline \end{array}$

**5.**  $\begin{array}{r} 425 \\ - 18 \\ \hline \end{array}$

**6.**  $\begin{array}{r} 365 \\ - 124 \\ \hline \end{array}$

**7.**  $\begin{array}{r} 783 \\ - 517 \\ \hline \end{array}$

**8.**  $\begin{array}{r} 946 \\ - 271 \\ \hline \end{array}$

**9.**  $\begin{array}{r} 514 \\ - 206 \\ \hline \end{array}$

**10.**  $\begin{array}{r} 684 \\ - 391 \\ \hline \end{array}$

Name \_\_\_\_\_

**Subtracting Two- and Three-Digit Numbers** (continued)

**11.** 
$$\begin{array}{r} 84 \\ - 13 \\ \hline \end{array}$$

**12.** 
$$\begin{array}{r} 65 \\ - 47 \\ \hline \end{array}$$

**13.** 
$$\begin{array}{r} 73 \\ - 58 \\ \hline \end{array}$$

**14.** 
$$\begin{array}{r} 91 \\ - 32 \\ \hline \end{array}$$

**15.** 
$$\begin{array}{r} 58 \\ - 29 \\ \hline \end{array}$$

**16.** 
$$\begin{array}{r} 649 \\ - 233 \\ \hline \end{array}$$

**17.** 
$$\begin{array}{r} 948 \\ - 319 \\ \hline \end{array}$$

**18.** 
$$\begin{array}{r} 725 \\ - 661 \\ \hline \end{array}$$

**19.** 
$$\begin{array}{r} 587 \\ - 469 \\ \hline \end{array}$$

**20.** 
$$\begin{array}{r} 855 \\ - 192 \\ \hline \end{array}$$

**21. Mental Math**  $94 - 20$

\_\_\_\_\_

**22. Mental Math**  $862 - 300$

\_\_\_\_\_

Use the data at the right for Exercises 23 and 24.

**23.** How much taller is a Saguaro cactus than Callie grass?

\_\_\_\_\_

**24.** How much taller is a California Redwood than a bamboo plant?

\_\_\_\_\_

Record Plant Heights	
California Redwood	366 ft
Bamboo	121 ft
Tree fern	60 ft
Saguaro cactus	52 ft
Callie grass	18 ft

**Test Prep** Choose the correct letter for each answer.

**25.** What is  $61 - 38$ ?

**A** 23

**B** 47

**C** 33

**D** 37

**E** NH

**26.** What is  $279 - 196$ ?

**F** 183

**G** 23

**H** 83

**J** 123

**K** NH



Name \_\_\_\_\_

## Mental Math Strategies

---

### Example 1

Find  $47 - 35$  by breaking apart the numbers in the problem.

$$40 - 30 = 10 \quad \text{Subtract the tens in both numbers.}$$

$$7 - 5 = 2 \quad \text{Subtract the ones in both numbers.}$$

$$10 + 2 = 12 \quad \text{Add the sums of the tens and ones.}$$

So,  $47 - 35 = 12$ .

### Example 2

Find  $235 + 197$  by using compensation.

$$235 + 200 = 435 \quad \begin{array}{l} \text{Add 3 to 197 to make 200.} \\ \text{200 is easier to use.} \end{array}$$

$$435 - 3 = 432 \quad \begin{array}{l} \text{Subtract 3 from the sum to} \\ \text{compensate for adding 3.} \end{array}$$

So,  $235 + 197 = 432$ .

---

Add or subtract mentally. Use breaking apart.

**1.**  $54 + 28$

\_\_\_\_\_

**2.**  $88 - 32$

\_\_\_\_\_

**3.**  $67 + 23$

\_\_\_\_\_

**4.**  $75 - 31$

\_\_\_\_\_

**5.**  $315 + 246$

\_\_\_\_\_

**6.**  $842 + 115$

\_\_\_\_\_

**7.**  $947 - 516$

\_\_\_\_\_

**8.**  $786 - 314$

\_\_\_\_\_

Add or subtract mentally. Use compensation.

**9.**  $68 + 24$

\_\_\_\_\_

**10.**  $95 - 48$

\_\_\_\_\_

**11.**  $326 + 295$

\_\_\_\_\_

**12.**  $540 - 298$

\_\_\_\_\_

Name \_\_\_\_\_

### **Mental Math Strategies** (continued)

Add or subtract mentally. Use breaking apart.

**13.**  $57 + 22$       **14.**  $283 + 118$       **15.**  $79 - 56$       **16.**  $466 - 325$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Add or subtract mentally. Use compensation.

**17.**  $62 + 29$       **18.**  $35 + 48$       **19.**  $77 - 28$       **20.**  $56 - 39$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**21.**  $256 + 195$       **22.**  $618 + 296$       **23.**  $742 - 394$       **24.**  $916 - 497$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- 25.** On vacation, the Gonzales family traveled 595 miles in one day. Their destination is 949 miles from their home. How much farther do they need to travel to get there?

\_\_\_\_\_

- 26. Math Reasoning** Juliana subtracts  $39 - 18$  mentally by thinking: " $30 - 10 = 20$ ,  $9 - 8 = 1$ , and  $20 - 1 = 19$ . The answer is 19." What did she do wrong? Explain.

\_\_\_\_\_

\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

- 27.** Subtract mentally. Use breaking apart.  
 $697 - 235$

**A** 822

**B** 862

**C** 462

**D** 422

**E** NH

- 28.** Jenni has walked 65 meters from her car to school and has to walk another 29 meters to her class. How far does she walk?

**F** 94 meters

**G** 84 meters

**H** 36 meters

**J** 44 meters

**K** NH

Name \_\_\_\_\_

## Temperature

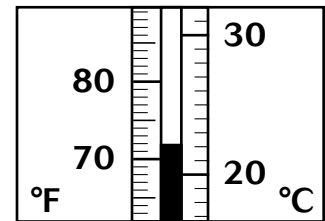
### Example 1

Look at the thermometer below. What is the temperature in degrees Celsius?

**Step 1** Find the Celsius side of the thermometer. Notice that between numbers the marks go up by 1s.

**Step 2** Start at 20°C. Then count up by 1s to where the mercury stops.

So, the temperature is 22°C.



### Example 2

Which is the better estimate for the temperature of a summer day? 50°F or 80°F

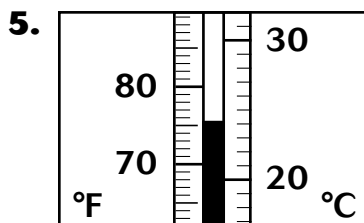
You know that normal room temperature is around 68°F. 50°F is well below 68°F, but 80°F is warmer than room temperature.

So, the better estimate is 80°F.

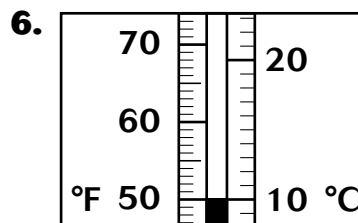
Choose the better temperature for each activity.

- |                          |                   |                       |                          |
|--------------------------|-------------------|-----------------------|--------------------------|
| <b>1.</b> bicycle riding | <b>2.</b> camping | <b>3.</b> ice skating | <b>4.</b> wearing shorts |
| 30°F or 70°F             | 0°C or 30°C       | 32°F or 72°F          | 35°C or 100°C            |

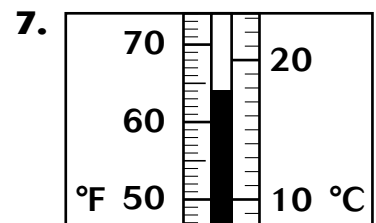
Write each temperature.



\_\_\_\_\_ °C



\_\_\_\_\_ °F



\_\_\_\_\_ °F

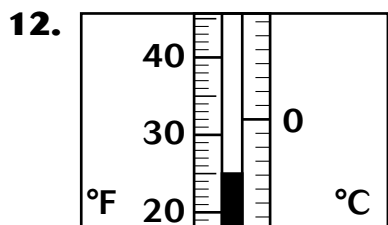
Name \_\_\_\_\_

### Temperature (continued)

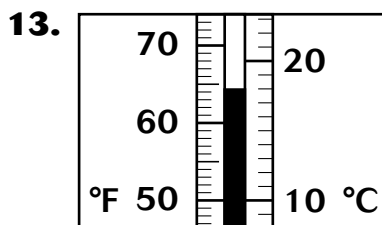
Choose the better estimate for the temperature.

- |                     |                     |                       |                       |
|---------------------|---------------------|-----------------------|-----------------------|
| <b>8.</b> hot pizza | <b>9.</b> ice cream | <b>10.</b> bath water | <b>11.</b> cold drink |
| 80°F or 160°F       | 0°C or 30°C         | 45°F or 95°F          | 0°C or 10°C           |

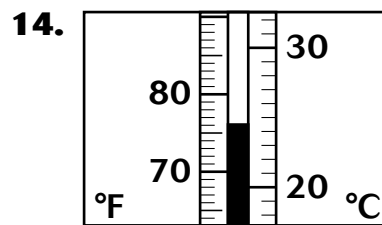
Write each temperature.



\_\_\_\_\_ °F



\_\_\_\_\_ °C



\_\_\_\_\_ °F

- 15.** One cold morning, the temperature was 35°F. The temperature rose to 53°F later in the day. How many degrees had the temperature increased? \_\_\_\_\_
- 16.** This morning the temperature was 65°F. Then it rose 3°. Then the temperature dropped 10°. What was the final temperature? \_\_\_\_\_
- 17. Math Reasoning** Joe thinks that 0°C is the same as 32°F. Do you agree? Why?  
\_\_\_\_\_  
\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

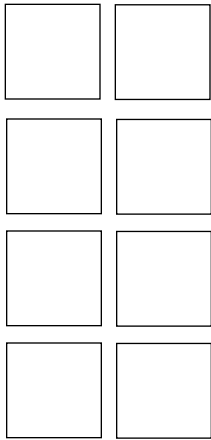
- 18.** Which is the best estimate for the temperature of cold milk?  
**A** 0°F      **B** 25°F      **C** 34°F      **D** 80°F      **E** NH
- 19.** The temperature is 33°C in Austin, 12°C in Summit, 5°C in Atlanta, and 18°C in Meyersville. In which city could you swim outdoors?  
**F** Austin      **G** Summit      **H** Atlanta      **J** Meyersville      **K** NH

Name \_\_\_\_\_

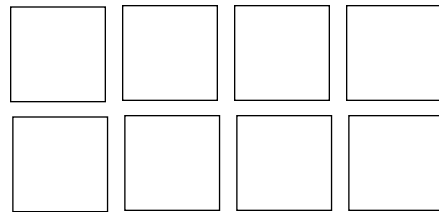
## Using Arrays

### Example

How many squares are in the arrays below? The display on the right is the array on the left turned sideways. Compare the two arrays.



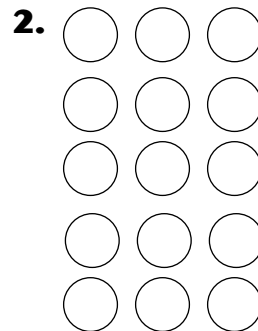
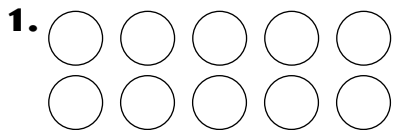
4 rows  
2 squares in  
each row  
 $4 \times 2 = 8$   
There are 8  
squares in the  
array.



2 rows  
4 squares in each row  
 $2 \times 4 = 8$   
There are 8 squares in the array.

Both arrays have 8 squares.

Write a multiplication sentence for each array.



Write the number that belongs in each ●.

**3.**  $4 \times 8 = 32$ , so  $8 \times 4 = \bullet$

**4.**  $9 \times 2 = 18$ , so  $\bullet \times 9 = 18$

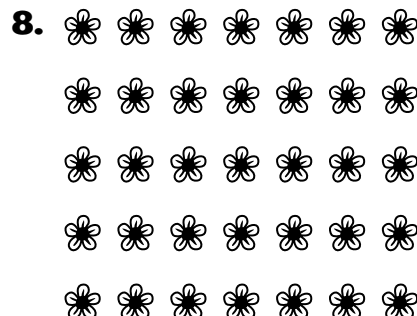
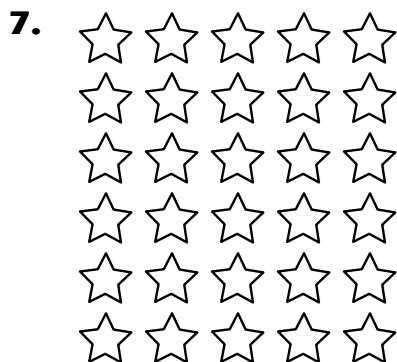
**5.**  $5 \times 7 = 35$ , so  $7 \times \bullet = 35$

**6.**  $3 \times 6 = 18$ , so  $\bullet \times 3 = 18$

Name \_\_\_\_\_

## Using Arrays (continued)

Write a multiplication sentence for each array.



\_\_\_\_\_

\_\_\_\_\_

9. A bookstore displays books by several authors in an array. There is 1 row of books by local writers and there are 2 rows of books by other authors. If there are 9 books in each row, how many books are on display?

\_\_\_\_\_

Write the number that belongs in each ●.

10.  $7 \times 3 = 21$ , so  $3 \times 7 = \bullet$

11.  $3 \times 2 = 6$ , so  $2 \times \bullet = 6$

\_\_\_\_\_

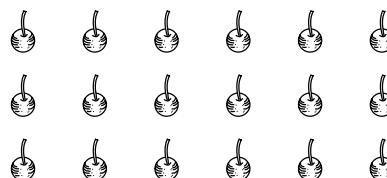
\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

12. Which multiplication sentence shows how many cherries are in the array displayed at the right?

**A**  $3 \times 4 = 12$       **C**  $3 \times 6 = 18$

**B**  $3 \times 5 = 15$       **D**  $3 \times 7 = 21$



13.  $4 \times 7 = 28$ , so  $\bullet \times 4 = 28$

**F** 4

**H** 7

**G** 8

**J** 28

Name \_\_\_\_\_

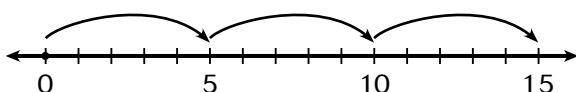
## Multiplying by 5

### Example

Find  $3 \times 5$ .

You can skip count by 5's to help you find the product.

$$5 + 5 + 5 = 15$$

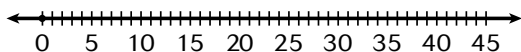


Count by 5's until you have said 3 numbers.

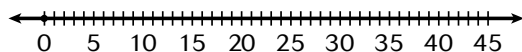
So,  $3 \times 5 = 15$ .

Use the number line to skip count by 5's and find the product.

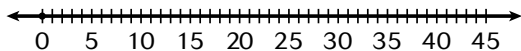
1.  $6 \times 5 =$  \_\_\_\_\_



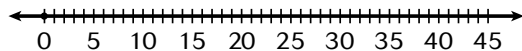
2.  $5 \times 5 =$  \_\_\_\_\_



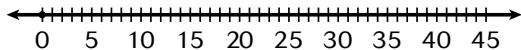
3.  $8 \times 5 =$  \_\_\_\_\_



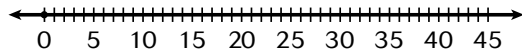
4.  $9 \times 5 =$  \_\_\_\_\_



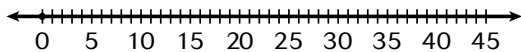
5.  $2 \times 5 =$  \_\_\_\_\_



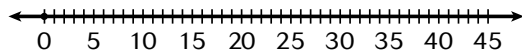
6.  $7 \times 5 =$  \_\_\_\_\_



7.  $4 \times 5 =$  \_\_\_\_\_



8.  $3 \times 5 =$  \_\_\_\_\_



Name \_\_\_\_\_

**Multiplying by 5** (continued)

9.  $4 \times 5 =$  \_\_\_\_\_

10.  $3 \times 5 =$  \_\_\_\_\_

11.  $5 \times 5 =$  \_\_\_\_\_

12.  $6 \times 5 =$  \_\_\_\_\_

13.  $5 \times 7 =$  \_\_\_\_\_

14.  $5 \times 8 =$  \_\_\_\_\_

15. 
$$\begin{array}{r} 7 \\ \times 5 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 5 \\ \times 3 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 8 \\ \times 5 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 5 \\ \times 4 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 1 \\ \times 5 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 2 \\ \times 5 \\ \hline \end{array}$$

21. 
$$\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 9 \\ \times 5 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} 5 \\ \times 1 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} 5 \\ \times 2 \\ \hline \end{array}$$

**25. Mental Math** If  $9 \times 5 = 45$ , then  $5 \times 9 =$  \_\_\_\_\_.

**26.** Jean reads 5 pages in a book before bedtime each night. Bedtime is at 9:00 P.M. How many pages does she read in 4 nights? \_\_\_\_\_

**27.** Movie tickets are on sale for \$5 each. Ross, Emily and John want to see the movie. Is \$18 enough for their tickets?  
\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**28.** Find  $8 \times 5$ .

**A** 50

**B** 13

**C** 35

**D** 40

**E** NH

**29.** Each student in Mrs. Anderson's class brings 5 cans to class for the food drive. There are 9 students in Mrs. Anderson's class. How many cans were collected?

**F** 40 cans

**G** 14 cans

**H** 45 cans

**J** 46 cans

**K** NH



Name \_\_\_\_\_

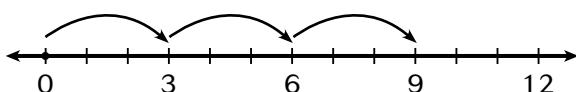
## Multiplying by 3

### Example

Find  $3 \times 3$ .

You can skip count by 3's to help you find the product.

$$3 + 3 + 3 = 9$$



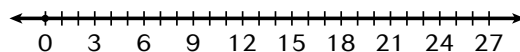
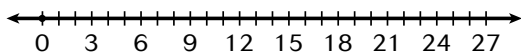
Count by 3's until you have said 3 numbers.

So,  $3 \times 3 = 9$ .

Use the number line to skip count by 3's and find the product.

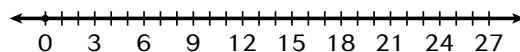
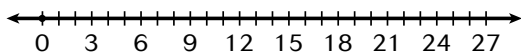
1.  $2 \times 3 =$  \_\_\_\_\_

2.  $4 \times 3 =$  \_\_\_\_\_



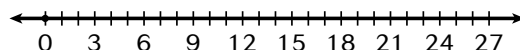
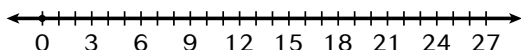
3.  $8 \times 3 =$  \_\_\_\_\_

4.  $9 \times 3 =$  \_\_\_\_\_



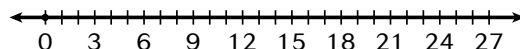
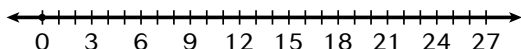
5.  $7 \times 3 =$  \_\_\_\_\_

6.  $3 \times 3 =$  \_\_\_\_\_



7.  $5 \times 3 =$  \_\_\_\_\_

8.  $6 \times 3 =$  \_\_\_\_\_



Name \_\_\_\_\_

### Multiplying by 3 (continued)

9.  $2 \times 3 =$  \_\_\_\_\_

10.  $1 \times 3 =$  \_\_\_\_\_

11.  $7 \times 3 =$  \_\_\_\_\_

12.  $3 \times 4 =$  \_\_\_\_\_

13.  $3 \times 6 =$  \_\_\_\_\_

14.  $3 \times 7 =$  \_\_\_\_\_

15. 
$$\begin{array}{r} 5 \\ \times 3 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 8 \\ \times 3 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 3 \\ \times 8 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 3 \\ \times 6 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 3 \\ \times 1 \\ \hline \end{array}$$

20. 
$$\begin{array}{r} 3 \\ \times 2 \\ \hline \end{array}$$

21. 
$$\begin{array}{r} 3 \\ \times 3 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 4 \\ \times 3 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} 3 \\ \times 5 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} 9 \\ \times 3 \\ \hline \end{array}$$

- 25. Math Reasoning** If you know the product of  $6 \times 3$ , explain how you can use it to find  $7 \times 3$ .

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- 26.** The weatherman says the temperature is rising 3 degrees every hour. How much hotter is it when 2 hours pass? \_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

- 27.** Mrs. Hernandez's class is raising money by selling boxes of cookies for \$3 each. Alex sold 4 boxes to her mother and 2 more to her neighbor. How much money did Alex raise?

**A** \$12

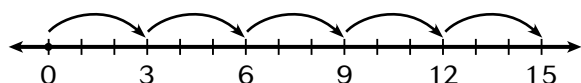
**B** \$6

**C** \$9

**D** \$18

**E** NH

- 28.** Which multiplication sentence can be represented by the number line shown?



**F**  $5 \times 3 = 15$

**G**  $6 \times 3 = 18$

**H**  $3 \times 6 = 18$

**J**  $4 \times 3 = 12$

Name \_\_\_\_\_

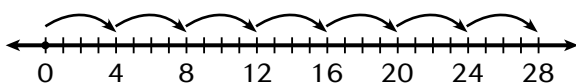
## Multiplying by 4

### Example

Find  $7 \times 4$ .

You can skip count by 4's to help you find the product.

$$4 + 4 + 4 + 4 + 4 + 4 + 4 = 28$$

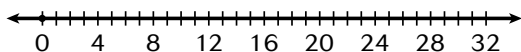


Count by 4's until you have said 7 numbers.

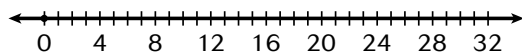
So,  $7 \times 4 = 28$ .

Use the number line to skip count by 4's and find the product.

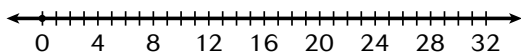
1.  $3 \times 4 =$  \_\_\_\_\_



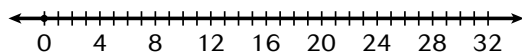
2.  $5 \times 4 =$  \_\_\_\_\_



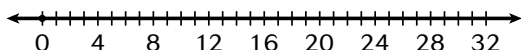
3.  $7 \times 4 =$  \_\_\_\_\_



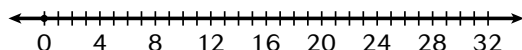
4.  $8 \times 4 =$  \_\_\_\_\_



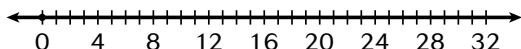
5.  $6 \times 4 =$  \_\_\_\_\_



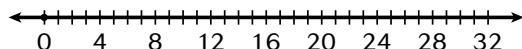
6.  $2 \times 4 =$  \_\_\_\_\_



7.  $4 \times 4 =$  \_\_\_\_\_



8.  $7 \times 4 =$  \_\_\_\_\_



Name \_\_\_\_\_

**Multiplying by 4** (continued)

**9.**  $8 \times 4 =$  \_\_\_\_\_

**10.**  $3 \times 4 =$  \_\_\_\_\_

**11.**  $1 \times 4 =$  \_\_\_\_\_

**12.**  $4 \times 4 =$  \_\_\_\_\_

**13.**  $4 \times 8 =$  \_\_\_\_\_

**14.**  $9 \times 4 =$  \_\_\_\_\_

**15.** 
$$\begin{array}{r} 7 \\ \times 4 \\ \hline \end{array}$$

**16.** 
$$\begin{array}{r} 6 \\ \times 4 \\ \hline \end{array}$$

**17.** 
$$\begin{array}{r} 4 \\ \times 6 \\ \hline \end{array}$$

**18.** 
$$\begin{array}{r} 4 \\ \times 1 \\ \hline \end{array}$$

**19.** 
$$\begin{array}{r} 4 \\ \times 2 \\ \hline \end{array}$$

**20.** 
$$\begin{array}{r} 4 \\ \times 5 \\ \hline \end{array}$$

**21.** 
$$\begin{array}{r} 5 \\ \times 4 \\ \hline \end{array}$$

**22.** 
$$\begin{array}{r} 4 \\ \times 7 \\ \hline \end{array}$$

**23.** 
$$\begin{array}{r} 2 \\ \times 4 \\ \hline \end{array}$$

**24.** 
$$\begin{array}{r} 4 \\ \times 3 \\ \hline \end{array}$$

**25. Algebra** If  $9 \times 4 = 36$ , then  $4 \times$  \_\_\_\_\_  $= 36$ .

**26.** Helen is planting a garden. She buys 3 trays of tomato plants. Each tray has 4 plants and costs \$2. How many tomato plants did Helen buy? \_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**27.** Find  $8 \times 4$ .

**A** 12

**B** 48

**C** 23

**D** 32

**E** NH

**28.** Which of the following is true?

**F**  $3 \times 4 = 3 + 3 + 3$

**J**  $3 \times 4 = 3 + 4$

**G**  $3 \times 4 = 4 + 4 + 4 + 4$

**K** NH

**H**  $3 \times 4 = 4 + 4 + 4$

Name \_\_\_\_\_

## Multiplying by 1 or 0

---

### Example 1

Find  $5 \times 1$ .

When you multiply any number by 1, the product is that number.

So,  $5 \times 1 = 5$ .

### Example 2

Find  $7 \times 0$ .

When you multiply any number by 0, the product is 0.

So,  $7 \times 0 = 0$ .

---

1.  $3 \times 1 =$  \_\_\_\_\_

2.  $4 \times 0 =$  \_\_\_\_\_

3.  $7 \times 1 =$  \_\_\_\_\_

4.  $6 \times 1 =$  \_\_\_\_\_

5.  $8 \times 0 =$  \_\_\_\_\_

6.  $3 \times 0 =$  \_\_\_\_\_

7.  $2 \times 0 =$  \_\_\_\_\_

8.  $2 \times 1 =$  \_\_\_\_\_

9.  $5 \times 0 =$  \_\_\_\_\_

10.  $9 \times 0 =$  \_\_\_\_\_

11.  $4 \times 1 =$  \_\_\_\_\_

12.  $5 \times 1 =$  \_\_\_\_\_

Name \_\_\_\_\_

**Multiplying by 1 or 0** (continued)

**13.**  $2 \times 1 =$  \_\_\_\_\_ **14.**  $4 \times 0 =$  \_\_\_\_\_ **15.**  $6 \times 1 =$  \_\_\_\_\_

**16.**  $1 \times 9 =$  \_\_\_\_\_ **17.**  $1 \times 2 =$  \_\_\_\_\_ **18.**  $4 \times 1 =$  \_\_\_\_\_

**19.** 
$$\begin{array}{r} 3 \\ \times 0 \\ \hline \end{array}$$
 **20.** 
$$\begin{array}{r} 0 \\ \times 9 \\ \hline \end{array}$$
 **21.** 
$$\begin{array}{r} 8 \\ \times 1 \\ \hline \end{array}$$
 **22.** 
$$\begin{array}{r} 1 \\ \times 8 \\ \hline \end{array}$$
 **23.** 
$$\begin{array}{r} 9 \\ \times 1 \\ \hline \end{array}$$

**24.** 
$$\begin{array}{r} 5 \\ \times 1 \\ \hline \end{array}$$
 **25.** 
$$\begin{array}{r} 5 \\ \times 0 \\ \hline \end{array}$$
 **26.** 
$$\begin{array}{r} 1 \\ \times 1 \\ \hline \end{array}$$
 **27.** 
$$\begin{array}{r} 1 \\ \times 0 \\ \hline \end{array}$$
 **28.** 
$$\begin{array}{r} 7 \\ \times 1 \\ \hline \end{array}$$

**29. Math Reasoning** Explain why  $1 \times 0 = 0$ .

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**30.** Five students in Mr. Brown's class take turns reading pages from a book. Each student reads one page, starting on page 6. How many pages do the students read?

\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**31.** Find  $9 \times 0$ .

**A** 9      **B** 0      **C** 1      **D** 90      **E** NH

**32.** You order a chicken sandwich and no french fries. Each sandwich costs \$2 and french fries cost \$1. How much money do you spend on french fries?

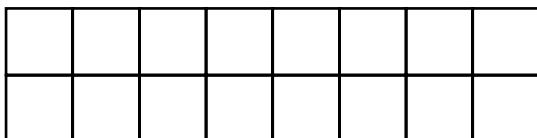
**F** \$2      **G** \$0      **H** \$1      **J** \$3      **K** NH

Name \_\_\_\_\_

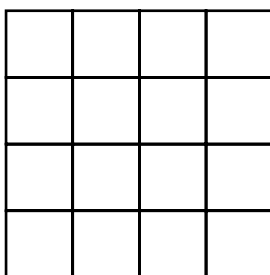
## Making Arrays

### Example

Write a multiplication sentence for each array.

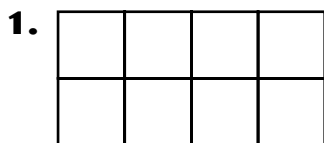


$$\begin{array}{ccccccc} 2 & \times & 8 & = & 16 \\ \text{number} & & \text{number in} & & \text{number} \\ \text{of rows} & & \text{each row} & & \text{in all} \end{array}$$

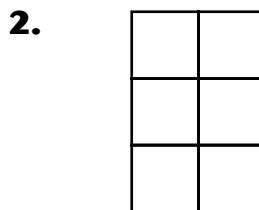


$$\begin{array}{ccccccc} 4 & \times & 4 & = & 16 \\ \text{number} & & \text{number in} & & \text{number} \\ \text{of rows} & & \text{each row} & & \text{in all} \end{array}$$

Write a multiplication sentence for each array.



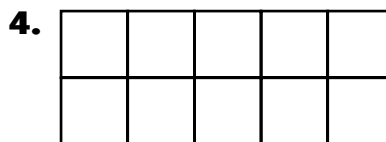
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_




\_\_\_\_\_

Name \_\_\_\_\_

## Making Arrays (continued)

Draw as many arrays as you can for the number 9.  
Then complete each multiplication sentence.

Drawing	Multiplication Sentence
	$1 \times 9 = 9$
5.	$3 \times \underline{\quad} = \underline{\quad}$
6.	$9 \times \underline{\quad} = \underline{\quad}$

7. Are either of the arrays in Exercises 5 or 6 square numbers?

\_\_\_\_\_

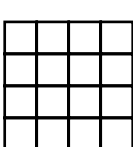
**Test Prep** Choose the correct letter for each answer.

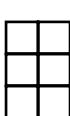
8. There are 5 rows of desks in Mrs. Crow's classroom.  
There are 4 students sitting in each row. How many  
students are in the classroom?

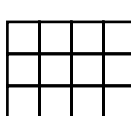
**A** 5      **B** 4      **C** 9      **D** 20      **E** NH

9. Which array represents a square number?

**F** 

**G** 

**H** 

**J** 

**K** NH

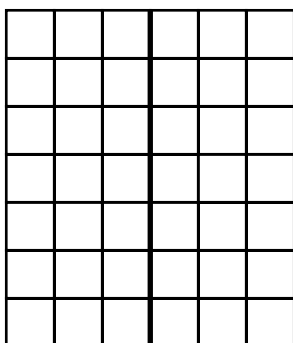


Name \_\_\_\_\_

## Multiplying by 6

### Example

Find  $7 \times 6$ .



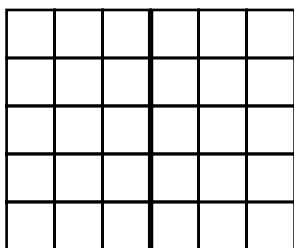
$$7 \times 3 = 21 \quad 7 \times 3 = 21$$

Think:  $7 \times 3 = 21$

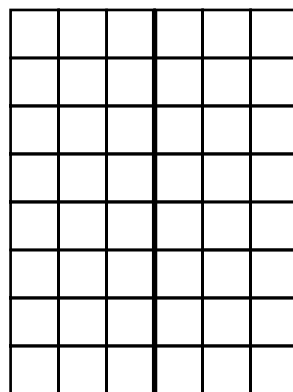
Double 21:  $21 + 21 = 42$

So,  $7 \times 6 = 42$ .

1.  $5 \times 6 =$  \_\_\_\_\_



2.  $8 \times 6 =$  \_\_\_\_\_



Use the first fact to help you find the second fact.

3.  $6 \times 3 =$  \_\_\_\_\_

4.  $2 \times 3 =$  \_\_\_\_\_

5.  $8 \times 3 =$  \_\_\_\_\_

$6 \times 6 =$  \_\_\_\_\_

$2 \times 6 =$  \_\_\_\_\_

$8 \times 6 =$  \_\_\_\_\_

6.  $3 \times 3 =$  \_\_\_\_\_

7.  $9 \times 3 =$  \_\_\_\_\_

8.  $4 \times 3 =$  \_\_\_\_\_

$3 \times 6 =$  \_\_\_\_\_

$9 \times 6 =$  \_\_\_\_\_

$4 \times 6 =$  \_\_\_\_\_

Name \_\_\_\_\_

### Multiplying by 6 (continued)

In Exercises 9–11, use the first fact to help you find the second fact.

**9.**  $3 \times 3 =$  \_\_\_\_\_      **10.**  $7 \times 3 =$  \_\_\_\_\_      **11.**  $4 \times 3 =$  \_\_\_\_\_

$3 \times 6 =$  \_\_\_\_\_       $7 \times 6 =$  \_\_\_\_\_       $4 \times 6 =$  \_\_\_\_\_

**12.**  $6 \times 1 =$  \_\_\_\_\_      **13.**  $2 \times 6 =$  \_\_\_\_\_      **14.**  $6 \times 6 =$  \_\_\_\_\_

**15.** 
$$\begin{array}{r} 1 \\ \times 6 \\ \hline \end{array}$$
      **16.** 
$$\begin{array}{r} 6 \\ \times 3 \\ \hline \end{array}$$
      **17.** 
$$\begin{array}{r} 6 \\ \times 8 \\ \hline \end{array}$$
      **18.** 
$$\begin{array}{r} 9 \\ \times 6 \\ \hline \end{array}$$

**19. Algebra** Complete the pattern. 6, 12, 18, \_\_\_\_\_, 30, \_\_\_\_\_

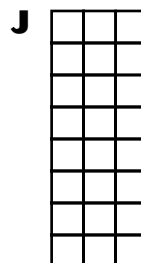
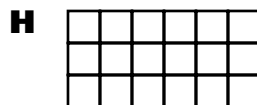
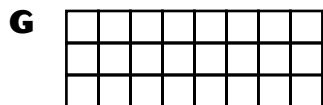
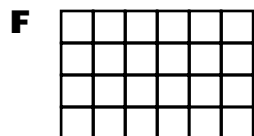
**20.** Students in a classroom are in groups with 6 students in each group. There are 4 groups of students. How many students are there in the classroom? \_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**21.** A parking lot has 8 rows of parking spaces. There are six cars in each row. The charge to park in this lot is \$2 each day. How many cars are in the parking lot?

**A** 48      **B** 16      **C** 12      **D** 14      **E** NH

**22.** Which array represents the multiplication sentence  $4 \times 6 = 24$ ?



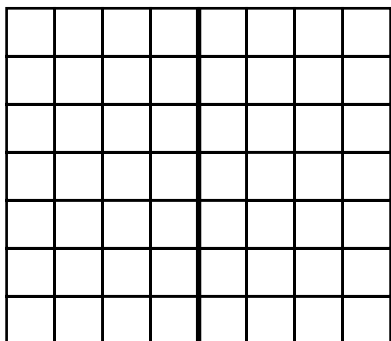
**K** NH

Name \_\_\_\_\_

## Multiplying by 8

### Example

Find  $7 \times 8$ .



$$7 \times 4 = 28 \quad 7 \times 4 = 28$$

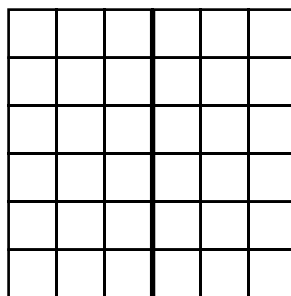
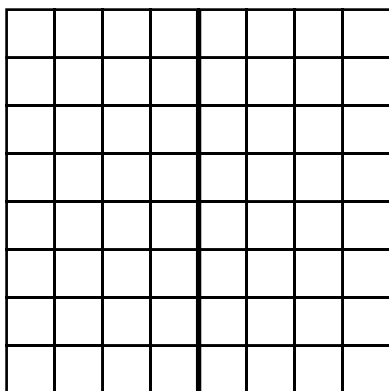
Think:  $7 \times 4 = 28$

Double 28:  $28 + 28 = 56$

So,  $7 \times 8 = 56$ .

1.  $8 \times 8 =$  \_\_\_\_\_

2.  $6 \times 6 =$  \_\_\_\_\_



Use the first fact to help you find the second fact.

3.  $6 \times 4 =$  \_\_\_\_\_

4.  $5 \times 4 =$  \_\_\_\_\_

5.  $2 \times 4 =$  \_\_\_\_\_

$6 \times 8 =$  \_\_\_\_\_

$5 \times 8 =$  \_\_\_\_\_

$2 \times 8 =$  \_\_\_\_\_

6.  $3 \times 4 =$  \_\_\_\_\_

7.  $4 \times 4 =$  \_\_\_\_\_

8.  $9 \times 4 =$  \_\_\_\_\_

$3 \times 8 =$  \_\_\_\_\_

$4 \times 8 =$  \_\_\_\_\_

$9 \times 8 =$  \_\_\_\_\_

Name \_\_\_\_\_

### **Multiplying by 8** (continued)

In Exercises 9–11, use the first fact to help you find the second fact.

**9.**  $3 \times 4 =$  \_\_\_\_\_

**10.**  $7 \times 4 =$  \_\_\_\_\_

**11.**  $4 \times 4 =$  \_\_\_\_\_

$3 \times 8 =$  \_\_\_\_\_

$7 \times 8 =$  \_\_\_\_\_

$4 \times 8 =$  \_\_\_\_\_

**12.**  $8 \times 1 =$  \_\_\_\_\_

**13.**  $2 \times 8 =$  \_\_\_\_\_

**14.**  $6 \times 8 =$  \_\_\_\_\_

**15.**  $0 \times 8 =$  \_\_\_\_\_

**16.**  $8 \times 2 =$  \_\_\_\_\_

**17.**  $8 \times 4 =$  \_\_\_\_\_

**18.** 
$$\begin{array}{r} 1 \\ \times 8 \\ \hline \end{array}$$

**19.** 
$$\begin{array}{r} 8 \\ \times 3 \\ \hline \end{array}$$

**20.** 
$$\begin{array}{r} 8 \\ \times 6 \\ \hline \end{array}$$

**21.** 
$$\begin{array}{r} 9 \\ \times 8 \\ \hline \end{array}$$

**22. Mental Math** If  $9 \times 8 = 72$ , then  $8 \times 9 =$  \_\_\_\_\_.

**23.** There are 8 ounces in each cup of water.

A recipe calls for 3 cups of water. How

many ounces of water are needed for the recipe? \_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**24.** Each chapter in a book has 8 pages and 3 pictures.

There are 6 chapters in the book. How many pages are there in the book?

**A** 24 pages    **B** 48 pages    **C** 18 pages    **D** 17 pages    **E** NH

**25.** Each student in Mrs. Williams's class checked out 8 books.

How many books have 2 students checked out?

**F** 10    **G** 24    **H** 16    **J** 8    **K** NH

Name \_\_\_\_\_

## Multiplying by 7

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### Example

Find  $4 \times 7$ .

You can find the product by changing the order of the factors:  $4 \times 7 = 7 \times 4$ .

You have learned how to multiply by 4's.

$7 \times 4 = 28$  so,  $4 \times 7 = 28$ .

---

**1.**     $\begin{array}{r} 2 \\ \times 7 \\ \hline \end{array}$        $\begin{array}{r} 7 \\ \times 2 \\ \hline \end{array}$

**2.**     $\begin{array}{r} 5 \\ \times 7 \\ \hline \end{array}$        $\begin{array}{r} 7 \\ \times 5 \\ \hline \end{array}$

**3.**     $\begin{array}{r} 1 \\ \times 7 \\ \hline \end{array}$        $\begin{array}{r} 7 \\ \times 1 \\ \hline \end{array}$

**4.**     $\begin{array}{r} 8 \\ \times 7 \\ \hline \end{array}$        $\begin{array}{r} 7 \\ \times 8 \\ \hline \end{array}$

**5.**     $\begin{array}{r} 3 \\ \times 7 \\ \hline \end{array}$        $\begin{array}{r} 7 \\ \times 3 \\ \hline \end{array}$

**6.**     $\begin{array}{r} 6 \\ \times 7 \\ \hline \end{array}$        $\begin{array}{r} 7 \\ \times 6 \\ \hline \end{array}$

**7.**     $\begin{array}{r} 4 \\ \times 7 \\ \hline \end{array}$        $\begin{array}{r} 7 \\ \times 4 \\ \hline \end{array}$

**8.**     $\begin{array}{r} 0 \\ \times 7 \\ \hline \end{array}$        $\begin{array}{r} 7 \\ \times 0 \\ \hline \end{array}$

Name \_\_\_\_\_

### Multiplying by 7 (continued)

For Exercises 9–11, use the first fact to help you multiply the second fact.

**9.** 
$$\begin{array}{r} 3 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 3 \\ \hline \end{array}$$

**10.** 
$$\begin{array}{r} 6 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 6 \\ \hline \end{array}$$

**11.** 
$$\begin{array}{r} 5 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 7 \\ \times 5 \\ \hline \end{array}$$

**12.** 
$$\begin{array}{r} 1 \\ \times 7 \\ \hline \end{array}$$

**13.** 
$$\begin{array}{r} 7 \\ \times 2 \\ \hline \end{array}$$

**14.** 
$$\begin{array}{r} 7 \\ \times 4 \\ \hline \end{array}$$

**15.** 
$$\begin{array}{r} 7 \\ \times 0 \\ \hline \end{array}$$

- 16. Math Reasoning** If you know the product of  $3 \times 7$ , how can you use that to find the product of  $4 \times 7$ ?

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- 17.** Five children are having birthday parties at a restaurant. Each child is 7 years old and has 7 candles on his or her birthday cake. How many candles are there altogether?

\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

- 18.** The cost to enter a theme park is \$7. A group of 7 children plans to stay 4 hours at the park. How much does it cost for the group to enter?

**A** \$14

**B** \$28

**C** \$18

**D** \$49

**E** NH

- 19.** How many days are there in 9 weeks?

**F** 45 days

**G** 63 days

**H** 42 days

**J** 49 days

**K** NH

Name \_\_\_\_\_

## Multiplying by 9

---

### Example

Find  $4 \times 9$ .

You can find the product by changing the order of the factors:  $4 \times 9 = 9 \times 4$ .

You have learned how to multiply by 4's.

If you know  $9 \times 4 = 36$ , then you know  $4 \times 9 = 36$ .

So,  $4 \times 9 = 36$ .

---

**1.**     2         9  
       $\times 9$         $\times 2$

**2.**     5         9  
       $\times 9$         $\times 5$

**3.**     1         9  
       $\times 9$         $\times 1$

**4.**     8         9  
       $\times 9$         $\times 8$

**5.**     3         9  
       $\times 9$         $\times 3$

**6.**     6         9  
       $\times 9$         $\times 6$

**7.**     7         9  
       $\times 9$         $\times 7$

**8.**     4         9  
       $\times 9$         $\times 4$

Name \_\_\_\_\_

## Multiplying by 9 (continued)

For Exercises 9–11, use the first fact to help you multiply the second fact.

$$\begin{array}{r} 9. \quad 3 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 6 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 5 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 9 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 1 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad 9 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad 9 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad 9 \\ \times 0 \\ \hline \end{array}$$

**Algebra** Find the rule, then complete the table.

16. Rule: Multiply by \_\_\_\_

17. Rule: Multiply by \_\_\_\_

18. Rule: Multiply by \_\_\_\_

Input	Output
2	18
1	_____
5	_____
4	_____

Input	Output
3	15
4	_____
6	_____
9	_____

Input	Output
5	10
7	_____
8	_____
9	_____

19. **Math Reasoning** Joshua and his sister have each saved \$9. They wish to buy a new game that costs \$20. If they put their savings together, do they have enough money to buy the game?

\_\_\_\_\_

**Test Prep** Choose the correct letter for the answer.

20. There are four quarters in a dollar. How many quarters are there in 9 dollars?

**A** 36

**B** 90

**C** 27

**D** 4

**E** NH



Name \_\_\_\_\_

## Multiplying by 10

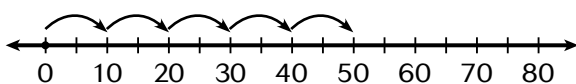
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### Example

Find  $5 \times 10$ .

You can skip count by 10's to help you find the product.

$$10 + 10 + 10 + 10 + 10 = 50$$

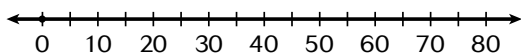


Count by 10's until you have said 5 numbers.

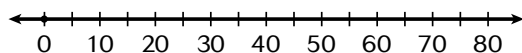
So,  $5 \times 10 = 50$ .

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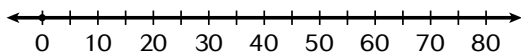
**1.**  $3 \times 10 =$  \_\_\_\_\_



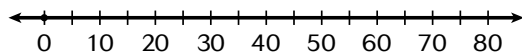
**2.**  $4 \times 10 =$  \_\_\_\_\_



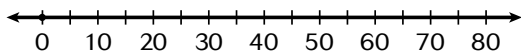
**3.**  $6 \times 10 =$  \_\_\_\_\_



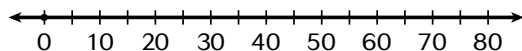
**4.**  $8 \times 10 =$  \_\_\_\_\_



**5.**  $2 \times 10 =$  \_\_\_\_\_



**6.**  $7 \times 10 =$  \_\_\_\_\_



Name \_\_\_\_\_

**Multiplying by 10** (continued)

**7.**  $2 \times 10 =$  \_\_\_\_\_      **8.**  $4 \times 10 =$  \_\_\_\_\_      **9.**  $6 \times 10 =$  \_\_\_\_\_

**10.**  $10 \times 6 =$  \_\_\_\_\_      **11.**  $10 \times 2 =$  \_\_\_\_\_      **12.**  $10 \times 5 =$  \_\_\_\_\_

**13.** 
$$\begin{array}{r} 3 \\ \times 10 \\ \hline \end{array}$$
      **14.** 
$$\begin{array}{r} 10 \\ \times 9 \\ \hline \end{array}$$
      **15.** 
$$\begin{array}{r} 8 \\ \times 10 \\ \hline \end{array}$$
      **16.** 
$$\begin{array}{r} 10 \\ \times 8 \\ \hline \end{array}$$
      **17.** 
$$\begin{array}{r} 9 \\ \times 10 \\ \hline \end{array}$$

**18.** 
$$\begin{array}{r} 5 \\ \times 10 \\ \hline \end{array}$$
      **19.** 
$$\begin{array}{r} 10 \\ \times 3 \\ \hline \end{array}$$
      **20.** 
$$\begin{array}{r} 10 \\ \times 1 \\ \hline \end{array}$$
      **21.** 
$$\begin{array}{r} 1 \\ \times 10 \\ \hline \end{array}$$
      **22.** 
$$\begin{array}{r} 7 \\ \times 10 \\ \hline \end{array}$$

**23. Algebra** Complete the pattern. 10, 20, \_\_\_\_\_, \_\_\_\_\_, 50, \_\_\_\_\_, 70

**24.** Seven friends get together to play a marble game. Sixty marbles are needed to play this game. Each friend brings ten marbles. Are there enough marbles to play the game?

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**Test Prep** Choose the correct letter for each answer.

**25.** There are 10 dimes in each dollar. How many dimes are there in \$6?

**A** 16      **B** 10      **C** 60      **D** 66      **E** NH

**26.** How many days are there in 10 weeks?

**F** 50      **G** 30      **H** 70      **J** 75      **K** NH

Name \_\_\_\_\_

## Missing Factors

---

### Example 1

Find the missing factor for  $\bullet \times 5 = 25$ .

$0 \times 5 = 0$	$3 \times 5 = 15$
$1 \times 5 = 5$	$4 \times 5 = 20$
$2 \times 5 = 10$	$5 \times 5 = 25$

The number 5 is the missing factor.

$$5 \times 5 = 25$$

### Example 2

Find the missing factor for  $8 \times \bullet = 56$ .

$8 \times 0 = 0$	$8 \times 4 = 32$
$8 \times 1 = 8$	$8 \times 5 = 40$
$8 \times 2 = 16$	$8 \times 6 = 48$
$8 \times 3 = 24$	$8 \times 7 = 56$

The number 7 is the missing factor.

$$8 \times 7 = 56$$

---

Find each missing factor.

1.  $6 \times \bullet = 12$

\_\_\_\_\_

2.  $\bullet \times 2 = 8$

\_\_\_\_\_

3.  $9 \times \bullet = 9$

\_\_\_\_\_

4.  $4 \times \bullet = 20$

\_\_\_\_\_

5.  $\bullet \times 7 = 21$

\_\_\_\_\_

6.  $\bullet \times 1 = 0$

\_\_\_\_\_

7.  $\bullet \times 3 = 27$

\_\_\_\_\_

8.  $8 \times \bullet = 48$

\_\_\_\_\_

9.  $\bullet \times 4 = 16$

\_\_\_\_\_

10.  $2 \times \bullet = 14$

\_\_\_\_\_

11.  $3 \times \bullet = 6$

\_\_\_\_\_

12.  $\bullet \times 5 = 35$

\_\_\_\_\_

Name \_\_\_\_\_

### Missing Factors (continued)

Find each missing factor.

**13.**  $3 \times \bullet = 18$

\_\_\_\_\_

**14.**  $5 \times \bullet = 15$

\_\_\_\_\_

**15.**  $\bullet \times 6 = 36$

\_\_\_\_\_

**16.**  $7 \times \bullet = 42$

\_\_\_\_\_

**17.**  $\bullet \times 8 = 16$

\_\_\_\_\_

**18.**  $\bullet \times 2 = 18$

\_\_\_\_\_

- 19.** Elaine needs 12 batteries to operate her 3 remote-control cars. How many batteries does each car need?

\_\_\_\_\_

- 20.** Bill bought 10 stickers for 30¢. How much did each sticker cost?

\_\_\_\_\_

- 21.** Suppose each helicopter has 6 passenger seats. How many helicopters are needed for 24 people?

\_\_\_\_\_

- 22.** If 3 helicopters carry 27 people, how many people does each helicopter carry?

\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

Which is the missing factor?

**23.**  $\bullet \times 4 = 32$

**A** 5

**B** 6

**C** 7

**D** 8

**24.**  $3 \times \bullet = 15$

**F** 4

**G** 5

**H** 6

**J** 7

- 25.** Alfie had 35 workbooks. He placed them into 7 equal stacks. How many workbooks were in each stack?

**A** 4 workbooks

**C** 6 workbooks

**B** 5 workbooks

**D** 7 workbooks

Name \_\_\_\_\_

## Relating Multiplication and Division

### Example

There are 30 squares arranged in 6 rows.  
How many are in each row?

$$30 \div 6 = \blacksquare$$

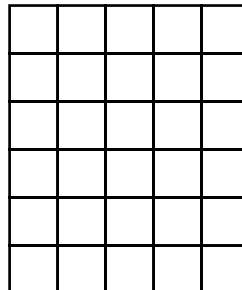
Use a multiplication fact to help you divide.

Think: 6 times what number equals 30?

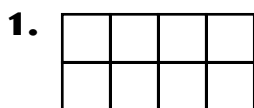
$$6 \times 5 = 30$$

$$\text{So, } 30 \div 6 = 5.$$

There are 5 squares in each row.

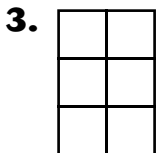


**Algebra** Use the array to complete each sentence.



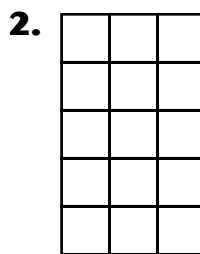
$$2 \times 4 = \underline{\hspace{2cm}}$$

$$8 \div 4 = \underline{\hspace{2cm}}$$



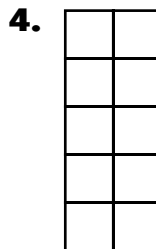
$$3 \times 2 = \underline{\hspace{2cm}}$$

$$6 \div 3 = \underline{\hspace{2cm}}$$



$$5 \times 3 = \underline{\hspace{2cm}}$$

$$15 \div 3 = \underline{\hspace{2cm}}$$



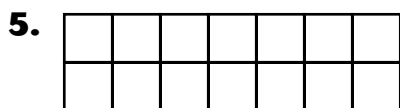
$$5 \times 2 = \underline{\hspace{2cm}}$$

$$10 \div 5 = \underline{\hspace{2cm}}$$

Name \_\_\_\_\_

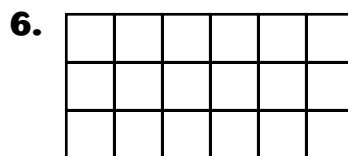
## Relating Multiplication and Division (continued)

**Algebra** Use the array to complete each sentence.



$$2 \times \underline{\quad} = 14$$

$$14 \div 2 = \underline{\quad}$$



$$3 \times \underline{\quad} = 18$$

$$18 \div 3 = \underline{\quad}$$

Write two related division sentences for each multiplication fact.

7.  $3 \times 4 = 12$

\_\_\_\_\_  
\_\_\_\_\_

8.  $5 \times 4 = 20$

\_\_\_\_\_  
\_\_\_\_\_

9.  $2 \times 6 = 12$

\_\_\_\_\_  
\_\_\_\_\_

10.  $7 \times 3 = 21$

\_\_\_\_\_  
\_\_\_\_\_

11.  $3 \times 8 = 24$

\_\_\_\_\_  
\_\_\_\_\_

12.  $9 \times 3 = 27$

\_\_\_\_\_  
\_\_\_\_\_

**Algebra** Find each missing number.

13.  $\underline{\quad} \times 7 = 14$

14.  $5 \times \underline{\quad} = 45$

15.  $\underline{\quad} \times 9 = 36$

16. A classroom has 24 students and 30 desks.

Six desks are left empty. There are 4 students sitting in each row. How many rows are there?

\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

17. There are 45 people in 9 rows. How many are in each row?

**A** 6

**B** 5

**C** 36

**D** 4

**E** NH

18. There are 10 desks in 5 rows. How many are in each row?

**F** 2

**G** 10

**H** 5

**J** 15

**K** NH

Name \_\_\_\_\_

## Dividing by 2

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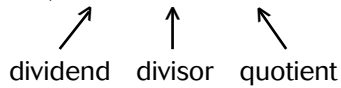
### Example

Find  $14 \div 2$ .

Think:  $2 \times \underline{\quad} = 14$

$$2 \times 7 = 14$$

So,  $14 \div 2 = 7$ .

  
dividend   divisor   quotient

---

Use the multiplication fact to find each quotient.

**1.**  $2 \times 4 = 8$

**2.**  $2 \times 5 = 10$

**3.**  $2 \times 1 = 2$

$8 \div 2 = \underline{\quad}$

$10 \div 2 = \underline{\quad}$

$2 \div 2 = \underline{\quad}$

**4.**  $2 \times 2 = 4$

**5.**  $2 \times \underline{\quad} = 14$

**6.**  $2 \times \underline{\quad} = 12$

$4 \div 2 = \underline{\quad}$

$14 \div 2 = \underline{\quad}$

$12 \div 2 = \underline{\quad}$

**7.**  $2 \times \underline{\quad} = 6$

**8.**  $2 \times \underline{\quad} = 16$

**9.**  $2 \times \underline{\quad} = 18$

$6 \div 2 = \underline{\quad}$

$16 \div 2 = \underline{\quad}$

$18 \div 2 = \underline{\quad}$

**10.** What multiplication fact can you use to find  $20 \div 2$ ?

\_\_\_\_\_

Name \_\_\_\_\_

### Dividing by 2 (continued)

Use the multiplication fact to find each quotient.

**11.**  $2 \times 2 = 4$

$4 \div 2 = \underline{\quad}$

**12.**  $2 \times 5 = 10$

$10 \div 2 = \underline{\quad}$

**13.**  $2 \times 3 = 6$

$6 \div 2 = \underline{\quad}$

**14.**  $2 \times \underline{\quad} = 8$

$8 \div 2 = \underline{\quad}$

**15.**  $2 \times \underline{\quad} = 12$

$12 \div 2 = \underline{\quad}$

**16.**  $2 \times \underline{\quad} = 18$

$18 \div 2 = \underline{\quad}$

Find each quotient.

**17.**  $16 \div 2 = \underline{\quad}$

**18.**  $10 \div 2 = \underline{\quad}$

**19.**  $4 \div 2 = \underline{\quad}$

**20.**  $8 \div 2 = \underline{\quad}$

**21.**  $2 \div 2 = \underline{\quad}$

**22.**  $6 \div 2 = \underline{\quad}$

**23.**  $12 \div 2 = \underline{\quad}$

**24.**  $18 \div 2 = \underline{\quad}$

**25.**  $14 \div 2 = \underline{\quad}$

**26. Algebra** Complete the pattern. 18, 16, 14, \_\_\_\_\_, \_\_\_\_\_, 8, \_\_\_\_\_

**27.** There are 10 cars in 2 lanes of traffic waiting at a stop light. Each lane has the same number of cars. Three of the cars are blue. How many cars are in each lane of traffic? \_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**28.** There are 10 boys and girls in a room. Half of them are boys and half are girls. How many girls are in the room?

**A** 10

**B** 20

**C** 5

**D** 15

**E** NH

**29.** Beth spends \$12 on two books. How much did each book cost?

**F** \$2

**G** \$6

**H** \$4

**J** \$12

**K** NH



Name \_\_\_\_\_

## Dividing by 4

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### Example

Find  $16 \div 4$ .

Another way of writing this division sentence is  $4 \overline{)16}$ .

Think:  $4 \times \underline{\quad} = 16$

$$4 \times 4 = 16$$

So,  $16 \div 4 = 4$ .

---

Use the multiplication fact to find each quotient.

**1.**  $4 \times 3 = 12$

**2.**  $4 \times 5 = 20$

**3.**  $4 \times 1 = 4$

$$12 \div 4 = \underline{\quad}$$

$$20 \div 4 = \underline{\quad}$$

$$4 \div 4 = \underline{\quad}$$

**4.**  $4 \times 2 = 8$

**5.**  $4 \times \underline{\quad} = 28$

**6.**  $4 \times \underline{\quad} = 16$

$$8 \div 4 = \underline{\quad}$$

$$28 \div 4 = \underline{\quad}$$

$$16 \div 4 = \underline{\quad}$$

**7.**  $4 \times \underline{\quad} = 24$

**8.**  $4 \times \underline{\quad} = 40$

**9.**  $4 \times \underline{\quad} = 36$

$$24 \div 4 = \underline{\quad}$$

$$40 \div 4 = \underline{\quad}$$

$$36 \div 4 = \underline{\quad}$$

**10.** What multiplication fact can you use to find  $32 \div 4$ ?

\_\_\_\_\_

Name \_\_\_\_\_

### Dividing by 4 (continued)

Use the multiplication fact to find each quotient.

**11.**  $4 \times 2 = 8$

**12.**  $4 \times 5 = 20$

**13.**  $4 \times 3 = 12$

$8 \div 4 = \underline{\quad}$

$20 \div 4 = \underline{\quad}$

$12 \div 4 = \underline{\quad}$

Find each quotient.

**14.**  $4 \overline{)20}$

**15.**  $4 \overline{)32}$

**16.**  $4 \overline{)36}$

**17.**  $4 \overline{)28}$

**18.**  $4 \overline{)24}$

**19.**  $4 \overline{)4}$

**20. Algebra** Complete each table.

Rule: Divide by 4

Input	Output
16	<u>        </u>
20	<u>        </u>
24	<u>        </u>

Rule: Divide by 2

Input	Output
10	<u>        </u>
16	<u>        </u>
18	<u>        </u>

Rule: Divide by 5

Input	Output
10	<u>        </u>
20	<u>        </u>
25	<u>        </u>

**21. Math Reasoning** There are four quarters in each dollar. Susan has 32 quarters. She wants to buy a book that costs \$7. Does she have enough money? \_\_\_\_\_

**Test Prep** Choose the correct letter for the answer.

**22.** Twenty-eight marbles are arranged into groups of four. How many groups are there?

**A** 6

**B** 7

**C** 14

**D** 2

**E** NH

Name \_\_\_\_\_

## Dividing by 5

---

### Example

Find  $15 \div 5$ .

Think:  $5 \times \underline{\quad} = 15$

$$5 \times 3 = 15$$

So,  $15 \div 5 = 3$ .

---

Use the multiplication fact to find each quotient.

**1.**  $5 \times 5 = 25$

$$25 \div 5 = \underline{\quad}$$

**2.**  $5 \times 2 = 10$

$$10 \div 5 = \underline{\quad}$$

**3.**  $5 \times 1 = 5$

$$5 \div 5 = \underline{\quad}$$

**4.**  $5 \times 3 = 15$

$$15 \div 5 = \underline{\quad}$$

**5.**  $5 \times \underline{\quad} = 30$

$$30 \div 5 = \underline{\quad}$$

**6.**  $5 \times \underline{\quad} = 50$

$$50 \div 5 = \underline{\quad}$$

**7.**  $5 \times \underline{\quad} = 20$

$$20 \div 5 = \underline{\quad}$$

**8.**  $5 \times \underline{\quad} = 45$

$$45 \div 5 = \underline{\quad}$$

**9.**  $5 \times \underline{\quad} = 40$

$$40 \div 5 = \underline{\quad}$$

**10.** What multiplication fact can you use to find  $35 \div 5$ ?

\_\_\_\_\_

Name \_\_\_\_\_

### Dividing by 5 (continued)

Use the multiplication fact to find each quotient.

**11.**  $5 \times 2 = 10$

**12.**  $5 \times 4 = 20$

**13.**  $5 \times 3 = 15$

$10 \div 2 = \underline{\hspace{2cm}}$

$20 \div 5 = \underline{\hspace{2cm}}$

$15 \div 5 = \underline{\hspace{2cm}}$

Find each quotient.

**14.**  $5 \overline{)20}$

**15.**  $5 \overline{)30}$

**16.**  $5 \overline{)35}$

**17.**  $5 \overline{)40}$

**18.**  $5 \overline{)45}$

**19.**  $5 \overline{)5}$

**Algebra** Complete each table.

**20.** Rule: Divide by 5

Input	Output
15	<u>        </u>
20	<u>        </u>
35	<u>        </u>

**21.** Rule: Divide by 4

Input	Output
12	<u>        </u>
20	<u>        </u>
24	<u>        </u>

**22.** Rule: Divide by 2

Input	Output
6	<u>        </u>
10	<u>        </u>
12	<u>        </u>

**Test Prep** Choose the correct letter for each answer.

**23.** There are 20 books in a stack. The teacher wants to divide the books equally between 5 students. How many books will each student receive?

**A** 5 books    **B** 15 books    **C** 25 books    **D** 4 books    **E** NH

**24.** Find a related division sentence for the multiplication sentence  $5 \times 2 = 10$ .

**F**  $2 \times 5 = 10$     **G**  $10 \div 5 = 2$     **H**  $20 \div 2 = 10$     **J**  $2 \times 10 = 20$     **K** NH

Name \_\_\_\_\_

## Dividing by 6

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### Example

Find  $12 \div 6$ .

Think:  $6 \times \underline{\quad} = 12$

$$6 \times 2 = 12$$

So,  $12 \div 6 = 2$ .

---

Use the multiplication fact to find each quotient.

**1.**  $6 \times 5 = 30$

$$30 \div 6 = \underline{\quad}$$

**2.**  $6 \times 2 = 12$

$$12 \div 6 = \underline{\quad}$$

**3.**  $6 \times 1 = 6$

$$6 \div 6 = \underline{\quad}$$

**4.**  $6 \times 3 = 18$

$$18 \div 6 = \underline{\quad}$$

**5.**  $6 \times \underline{\quad} = 36$

$$36 \div 6 = \underline{\quad}$$

**6.**  $6 \times \underline{\quad} = 42$

$$42 \div 6 = \underline{\quad}$$

**7.**  $6 \times \underline{\quad} = 24$

$$24 \div 6 = \underline{\quad}$$

**8.**  $6 \times \underline{\quad} = 54$

$$54 \div 6 = \underline{\quad}$$

**9.**  $6 \times \underline{\quad} = 60$

$$60 \div 6 = \underline{\quad}$$

**10.** What multiplication fact can you use to find  $48 \div 6$ ?

\_\_\_\_\_

Name \_\_\_\_\_

### Dividing by 6 (continued)

Use the multiplication fact to find each quotient.

**11.**  $6 \times 2 = 12$

**12.**  $6 \times 4 = 24$

**13.**  $6 \times 3 = 18$

$12 \div 6 = \underline{\hspace{2cm}}$

$24 \div 6 = \underline{\hspace{2cm}}$

$18 \div 6 = \underline{\hspace{2cm}}$

Find each quotient.

**14.**  $6 \overline{)54}$

**15.**  $6 \overline{)30}$

**16.**  $6 \overline{)36}$

**17.**  $6 \overline{)48}$

**18.**  $6 \overline{)42}$

**19.**  $6 \overline{)6}$

**20. Math Reasoning** If you know that  $6 \times 12 = 72$ ,  
then what is  $72 \div 6$ ? \_\_\_\_\_

**21.** Mrs. Carpenter's class is dividing into groups  
for group work. There are 18 students in the  
class and 24 desks. How many students will  
be in each group if there are six groups? \_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**22.** Forty-eight cards are divided into groups of six.  
How many cards are in each group?

**A** 8

**B** 7

**C** 6

**D** 42

**E** NH

**23.** Which of the following is true?

**F**  $6 \div 6 = 6$

**G**  $6 \div 1 = 1$

**H**  $0 \div 6 = 6$

**J**  $6 \div 6 = 1$

Name \_\_\_\_\_

## Dividing by 7

---

### Example

Find  $21 \div 7$ .

Think:  $7 \times \underline{\quad} = 21$

$$7 \times 3 = 21$$

So,  $21 \div 7 = 3$ .

---

Use the multiplication fact to find each quotient.

**1.**  $7 \times 5 = 35$

$$35 \div 7 = \underline{\quad}$$

**2.**  $7 \times 2 = 14$

$$14 \div 7 = \underline{\quad}$$

**3.**  $7 \times 1 = 7$

$$7 \div 7 = \underline{\quad}$$

**4.**  $7 \times 3 = 21$

$$21 \div 7 = \underline{\quad}$$

**5.**  $7 \times \underline{\quad} = 35$

$$35 \div 7 = \underline{\quad}$$

**6.**  $7 \times \underline{\quad} = 70$

$$70 \div 7 = \underline{\quad}$$

**7.**  $7 \times \underline{\quad} = 63$

$$63 \div 7 = \underline{\quad}$$

**8.**  $7 \times \underline{\quad} = 56$

$$56 \div 7 = \underline{\quad}$$

**9.**  $7 \times \underline{\quad} = 28$

$$28 \div 7 = \underline{\quad}$$

**10.** What multiplication fact can you use to find  $42 \div 6$ ?

\_\_\_\_\_

Name \_\_\_\_\_

### Dividing by 7 (continued)

Use the multiplication fact to find each quotient.

**11.**  $7 \times 2 = 14$

**12.**  $7 \times 5 = 35$

**13.**  $7 \times 3 = 21$

$14 \div 7 = \underline{\quad}$

$35 \div 7 = \underline{\quad}$

$21 \div 7 = \underline{\quad}$

Find each quotient.

**14.**  $7 \overline{)56}$

**15.**  $7 \overline{)35}$

**16.**  $7 \overline{)21}$

**17.**  $7 \overline{)63}$

**18.**  $7 \overline{)42}$

**19.**  $7 \overline{)7}$

**20. Math Reasoning** If you know that  $7 \times 12 = 84$ ,  
then what is  $84 \div 7$ ? \_\_\_\_\_

**21.** A board is 56 inches long and 2 inches thick.  
A carpenter needs to cut the board into 7-inch  
pieces. How many pieces can he make? \_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**22.** Forty-two pencils are to be divided among 7 students.  
How many pencils does each student get?

**A** 7

**B** 6

**C** 14

**D** 2

**E** NH

**23.** Mary has 8 marbles and John has 6. If they put their  
marbles together and divide them between 7 people,  
how many will each person get?

**F** 3

**G** 1

**H** 2

**J** 14

**K** NH



Name \_\_\_\_\_

## Dividing by 8

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### Example

Find  $24 \div 8$ .

Think:  $8 \times \underline{\quad} = 24$

$$8 \times 3 = 24$$

So,  $24 \div 8 = 3$ .

---

Use the multiplication fact to find each quotient.

**1.**  $8 \times 5 = 40$

$$40 \div 8 = \underline{\quad}$$

**2.**  $8 \times 2 = 16$

$$16 \div 8 = \underline{\quad}$$

**3.**  $8 \times 1 = 8$

$$8 \div 8 = \underline{\quad}$$

**4.**  $8 \times 3 = 24$

$$24 \div 8 = \underline{\quad}$$

**5.**  $8 \times \underline{\quad} = 32$

$$32 \div 8 = \underline{\quad}$$

**6.**  $8 \times \underline{\quad} = 48$

$$48 \div 8 = \underline{\quad}$$

**7.**  $8 \times \underline{\quad} = 64$

$$64 \div 8 = \underline{\quad}$$

**8.**  $8 \times \underline{\quad} = 80$

$$80 \div 8 = \underline{\quad}$$

**9.**  $8 \times \underline{\quad} = 72$

$$72 \div 8 = \underline{\quad}$$

**10.** What multiplication fact can you use to find  $56 \div 8$ ?

\_\_\_\_\_

Name \_\_\_\_\_

### Dividing by 8 (continued)

Use the multiplication fact to find each quotient.

**11.**  $8 \times 2 = 16$

**12.**  $8 \times 5 = 40$

**13.**  $8 \times 3 = 24$

$16 \div 8 = \underline{\hspace{2cm}}$

$40 \div 8 = \underline{\hspace{2cm}}$

$24 \div 8 = \underline{\hspace{2cm}}$

Find each quotient.

**14.**  $8 \overline{)56}$

**15.**  $8 \overline{)32}$

**16.**  $8 \overline{)40}$

**17.**  $8 \overline{)64}$

**18.**  $8 \overline{)72}$

**19.**  $8 \overline{)8}$

**20. Math Reasoning** Complete the pattern.

64, 56, \_\_\_\_\_, 40, \_\_\_\_\_, \_\_\_\_\_, 16

**21.** Eight friends go to lunch and split the \$40 ticket evenly. How much does each friend pay for lunch? \_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**22.** Sixteen apples are divided into 8 groups.  
How many are in each group?

**A** 8

**B** 2

**C** 6

**D** 3

**E** NH

**23.** Jack has 48 minutes to finish a test. Sixteen other students are taking the test at the same time. There are 8 questions on the test. How long does Jack have to spend on each question?

**F** 6

**G** 40

**H** 2

**J** 3

**K** NH

Name \_\_\_\_\_

## Dividing by 9

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### Example

Find  $36 \div 9$ .

Think:  $9 \times \underline{\quad} = 36$

$$9 \times 4 = 36$$

So,  $36 \div 9 = 4$ .

---

Use the multiplication fact to find each quotient.

**1.**  $9 \times 5 = 45$

$$45 \div 9 = \underline{\quad}$$

**2.**  $9 \times 2 = 18$

$$18 \div 9 = \underline{\quad}$$

**3.**  $9 \times 1 = 9$

$$9 \div 9 = \underline{\quad}$$

**4.**  $9 \times 3 = 27$

$$27 \div 9 = \underline{\quad}$$

**5.**  $9 \times \underline{\quad} = 36$

$$36 \div 9 = \underline{\quad}$$

**6.**  $9 \times \underline{\quad} = 81$

$$81 \div 9 = \underline{\quad}$$

**7.**  $9 \times \underline{\quad} = 54$

$$54 \div 9 = \underline{\quad}$$

**8.**  $9 \times \underline{\quad} = 90$

$$90 \div 9 = \underline{\quad}$$

**9.**  $9 \times \underline{\quad} = 72$

$$72 \div 9 = \underline{\quad}$$

**10.** What multiplication fact can you use to find  $63 \div 9$ ?

\_\_\_\_\_

Name \_\_\_\_\_

**Dividing by 9** (continued)

Use the multiplication fact to find each quotient.

**11.**  $9 \times 2 = 18$

**12.**  $9 \times 5 = 45$

**13.**  $9 \times 3 = 27$

$18 \div 9 = \underline{\hspace{2cm}}$

$45 \div 9 = \underline{\hspace{2cm}}$

$27 \div 9 = \underline{\hspace{2cm}}$

Find each quotient.

**14.**  $45 \div 9 = \underline{\hspace{2cm}}$

**15.**  $18 \div 9 = \underline{\hspace{2cm}}$

**16.**  $27 \div 9 = \underline{\hspace{2cm}}$

**17.**  $9 \overline{)54}$

**18.**  $9 \overline{)36}$

**19.**  $9 \overline{)45}$

**20. Math Reasoning** Complete the pattern.

18, \_\_\_\_\_, 36, \_\_\_\_\_, \_\_\_\_\_, 63

Add both digits together for each of the numbers in the pattern (for example,  $3 + 6 = 9$ ). What do you notice about each sum?

\_\_\_\_\_

**21.** Ben's garden has 3 different kinds of vegetables.

He has planted 36 green bean plants in 9 rows.

How many are in each row?

\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**22.** Find the missing sign:  $18 \blacksquare 9 = 2$ .

**A**  $\times$

**B**  $-$

**C**  $+$

**D**  $\div$

**E** NH

**23.** There are 9 people on a calling committee. The list of people to be called is on 2 pages and contains 72 names. How many names will each person call?

**F** 8

**G** 36

**H** 18

**J** 4

**K** NH

Name \_\_\_\_\_

## Dividing by 10

---

### Example

Find  $30 \div 10$ .

Think:  $10 \times \underline{\quad} = 30$

$$10 \times 3 = 30$$

So,  $30 \div 10 = 3$ .

---

Use the multiplication fact to find each quotient.

**1.**  $10 \times 5 = 50$

**2.**  $10 \times 2 = 20$

**3.**  $10 \times 1 = 10$

$$50 \div 10 = \underline{\quad}$$

$$20 \div 10 = \underline{\quad}$$

$$10 \div 10 = \underline{\quad}$$

**4.**  $10 \times 3 = 30$

**5.**  $10 \times \underline{\quad} = 40$

**6.**  $10 \times \underline{\quad} = 60$

$$30 \div 10 = \underline{\quad}$$

$$40 \div 10 = \underline{\quad}$$

$$60 \div 10 = \underline{\quad}$$

**7.**  $10 \times \underline{\quad} = 100$

**8.**  $10 \times \underline{\quad} = 70$

**9.**  $10 \times \underline{\quad} = 80$

$$100 \div 10 = \underline{\quad}$$

$$70 \div 10 = \underline{\quad}$$

$$80 \div 10 = \underline{\quad}$$

**10.** What multiplication sentence can you use to find  $90 \div 10$ ?

\_\_\_\_\_

Name\_\_\_\_\_

### Dividing by 10 (continued)

Use the multiplication fact to find each quotient.

**11.**  $10 \times 2 = 20$

**12.**  $10 \times 4 = 40$

**13.**  $10 \times 3 = 30$

$20 \div 10 = \underline{\hspace{2cm}}$

$40 \div 10 = \underline{\hspace{2cm}}$

$30 \div 10 = \underline{\hspace{2cm}}$

Find each quotient.

**14.**  $10 \div 10 = \underline{\hspace{2cm}}$

**15.**  $50 \div 10 = \underline{\hspace{2cm}}$

**16.**  $90 \div 10 = \underline{\hspace{2cm}}$

**17.**  $10 \overline{)20}$

**18.**  $10 \overline{)30}$

**19.**  $10 \overline{)70}$

**Algebra** Complete each table.

**20.** Rule: Divide by 10

Input	Output
30	<u>        </u>
70	<u>        </u>
80	<u>        </u>

**21.** Rule: Divide by 4

Input	Output
12	<u>        </u>
20	<u>        </u>
40	<u>        </u>

**22.** Rule: Divide by 8

Input	Output
16	<u>        </u>
24	<u>        </u>
80	<u>        </u>

**Test Prep** Choose the correct letter for each answer.

**23.** Jill has 60 dimes. There are 10 dimes in each dollar.  
How many dollars are Jill's dimes equal to?

**A** \$50

**B** \$10

**C** \$6

**D** \$7

**E** NH

**24.** Find a related division sentence for the multiplication sentence  $10 \times 2 = 20$ .

**F**  $2 \times 10 = 20$

**G**  $10 \div 20 = 2$

**H**  $20 \div 10 = 2$

**J**  $20 \div 4 = 5$

**K** NH

Name \_\_\_\_\_

## Finding the Missing Numbers

---

### Example 1

Find the missing number in this equation:

$$42 \div \bullet = 6.$$

You know that  $6 \times 7 = 42$ .

So,  $\bullet = 7$ .

### Example 2

Find the missing number in this equation:

$$\bullet \div 5 = 9.$$

You know that  $9 \times 5 = 45$ .

So,  $\bullet = 45$ .

---

Find each missing number.

**1.**  $28 \div \bullet = 7$

\_\_\_\_\_

**2.**  $\bullet \div 3 = 8$

\_\_\_\_\_

**3.**  $8 \div \bullet = 4$

\_\_\_\_\_

**4.**  $\bullet \div 9 = 6$

\_\_\_\_\_

**5.**  $15 \div \bullet = 5$

\_\_\_\_\_

**6.**  $36 \div \bullet = 6$

\_\_\_\_\_

**7.**  $56 \div \bullet = 8$

\_\_\_\_\_

**8.**  $12 \div \bullet = 3$

\_\_\_\_\_

**9.**  $\bullet \div 2 = 9$

\_\_\_\_\_

**10.**  $\bullet \div 8 = 2$

\_\_\_\_\_

**11.**  $\bullet \div 5 = 4$

\_\_\_\_\_

**12.**  $\bullet \div 7 = 3$

\_\_\_\_\_

**13.**  $\bullet \div 8 = 4$

\_\_\_\_\_

**14.**  $40 \div \bullet = 5$

\_\_\_\_\_

**15.**  $\bullet \div 9 = 3$

\_\_\_\_\_

**16.**  $48 \div \bullet = 6$

\_\_\_\_\_

Name \_\_\_\_\_

### Finding the Missing Numbers (continued)

Find each missing number.

**17.**  $25 \div \bullet = 5$     **18.**  $36 \div \bullet = 4$     **19.**  $\bullet \div 2 = 6$     **20.**  $\bullet \div 3 = 4$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**21.**  $63 \div \bullet = 7$     **22.**  $\bullet \div 3 = 3$     **23.**  $16 \div \bullet = 8$     **24.**  $\bullet \div 8 = 9$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Write a division sentence to solve each exercise.

- 25.** Jan wants to buy a new radio for her club. There are 5 people in the club. Jan checked the price and decided she needed \$6 from each club member. How much does the radio cost?

$\bullet$  \_\_\_\_\_

- 26.** Matt bought a jar of marbles. He separated them into piles of 8. He had 3 piles of red and 3 piles of blue. How many marbles did he buy?

$\bullet$  \_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

Find the missing number.

**27.**  $18 \div \bullet = 6$

**28.**  $\bullet \div 7 = 4$

**A** 2

**C** 6

**F** 14

**H** 27

**B** 3

**D** 9

**G** 24

**J** 28

- 29.** Which division sentence can be used to solve the exercise?

There are 9 apples in each bag. You have 3 bags.  
Tell how many apples you have.

**A**  $27 \div 6 = \bullet$

**C**  $\bullet \div 3 = 9$

**B**  $27 \times \bullet = 9$

**D**  $9 \div 3 = \bullet$



Name \_\_\_\_\_

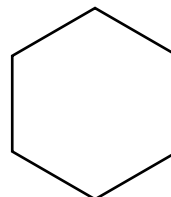
## Plane Figures

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### Example 1

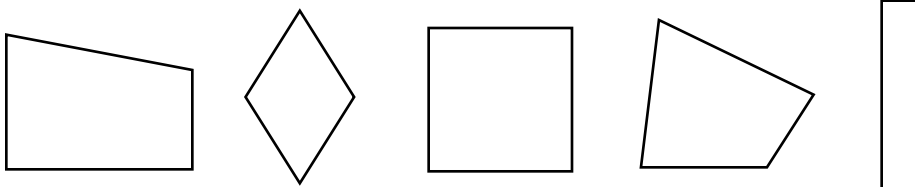
Name the figure below.

The figure has 6 sides and 6 corners, so it is a hexagon.



### Example 2

What do the following figures have in common?

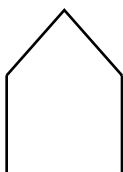


Each of the figures has 4 sides and 4 corners, so they are all quadrilaterals.

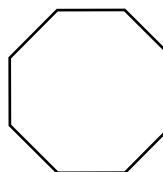
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Name each figure. Then tell the number of sides and the number of corners each figure has.

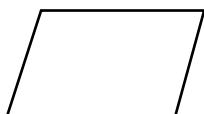
1.



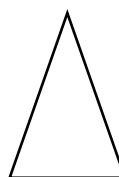
2.



3.



4.

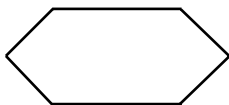


Name \_\_\_\_\_

**Plane Figures** (continued)

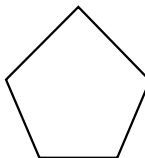
Name each plane figure. Then tell the number of sides and the number of corners each figure has.

**5.**



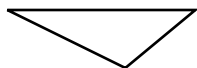
\_\_\_\_\_

**6.**



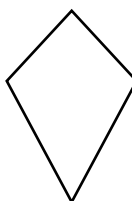
\_\_\_\_\_

**7.**



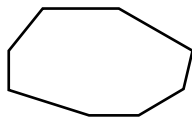
\_\_\_\_\_

**8.**



\_\_\_\_\_

**9.**



\_\_\_\_\_

**10.**



\_\_\_\_\_

**11.** What is the shape of the cover of your math textbook?

\_\_\_\_\_

**12. Math Reasoning** Is any plane figure with three sides and three corners a triangle?

\_\_\_\_\_

**Test Prep** Choose the correct letter for the answer.

**13.** Which is true?

**A** A hexagon has 5 sides.

**C** A triangle has 2 corners.

**B** An octagon has 8 corners.

**D** A quadrilateral has 6 sides.

Name \_\_\_\_\_

## Quadrilaterals

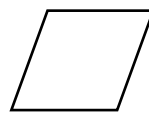
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### Example

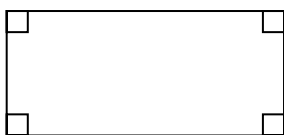
Name the quadrilaterals.



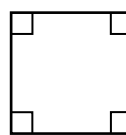
A **parallelogram** has two pairs of parallel sides and opposite sides which are the same length.



A **rhombus** has two pairs of parallel sides and all sides are the same length.



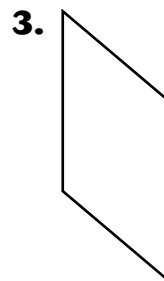
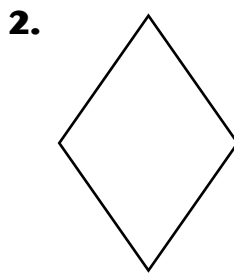
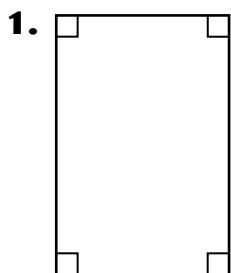
A **rectangle** has two pairs of parallel sides, opposite sides which are the same length, and 4 right angles.



A **square** has two pairs of parallel sides, all sides the same length, and 4 right angles.

---

Write the name of each quadrilateral.



\_\_\_\_\_

\_\_\_\_\_

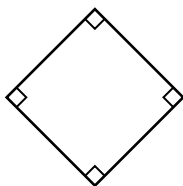
\_\_\_\_\_

Name \_\_\_\_\_

### Quadrilaterals (continued)

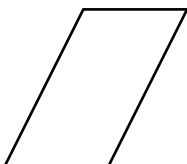
Write the name of each quadrilateral.

4.



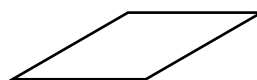
\_\_\_\_\_

5.



\_\_\_\_\_

6.



\_\_\_\_\_

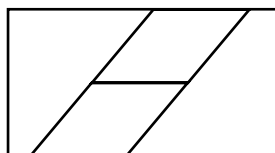
7. I have two pairs of parallel sides, and all of my sides are equal, but I have no right angles. What quadrilateral am I?

\_\_\_\_\_

8. I have two pairs of parallel sides and 4 right angles, but all 4 of my sides are not equal. What quadrilateral am I?

\_\_\_\_\_

9. Name all of the quadrilaterals in the picture at the right.



\_\_\_\_\_

10. **Math Reasoning** Can a quadrilateral be both a rhombus and a parallelogram? Explain your answer.

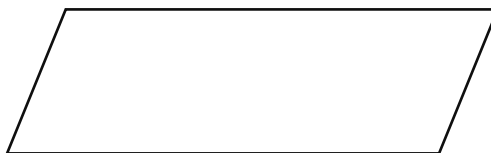
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Test Prep** Choose the correct letter for the answer.

11. What is the name of this figure?



**A** Parallelogram   **B** Square   **C** Rhombus   **D** Rectangle

Name \_\_\_\_\_

## Perimeter

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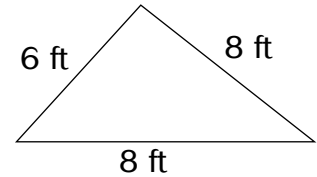
### Example 1

Find the perimeter of the triangle at the right.

Add the lengths of the sides.

$$6 + 8 + 8 = 22$$

So, the perimeter of the triangle is 22 feet.



### Example 2

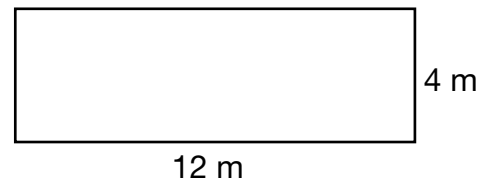
Find the perimeter of the rectangle at the right.

You know that opposite sides of a rectangle have the same length. So, there are two sides with length 12 meters and two sides with length 4 meters.

Add all the lengths.

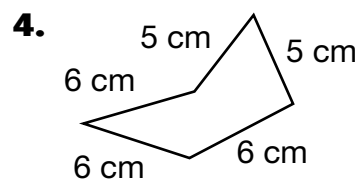
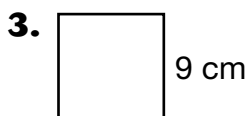
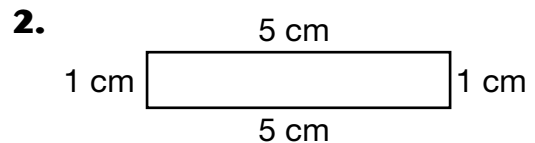
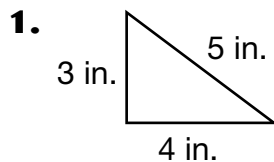
$$12 + 4 + 12 + 4 = 32$$

The perimeter of the rectangle is 32 meters.



---

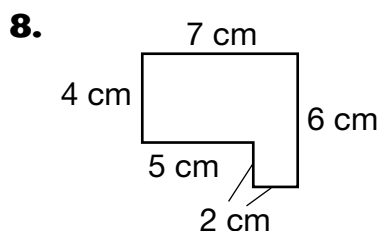
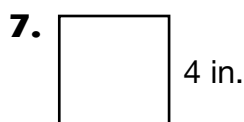
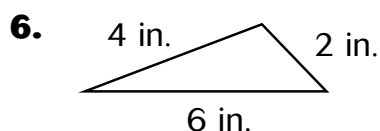
Find the perimeter of each figure.



Name \_\_\_\_\_

### Perimeter (continued)

Find the perimeter of each figure.



9. Trevor is making a pen for his pet rabbits. His pen is 8 feet long and 6 feet wide. How many feet of fencing will Trevor need?
- \_\_\_\_\_

10. Tom is making a square garden with sides 10 feet long. How many feet of fencing will he need?
- \_\_\_\_\_

### Test Prep Choose the correct letter for each answer.

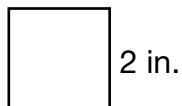
11. Which is the perimeter of the square?

**A** 2 inches

**B** 4 inches

**C** 8 inches

**D** 12 inches



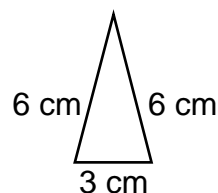
12. Which is the perimeter of the triangle?

**F** 3 cm

**G** 6 cm

**H** 9 cm

**J** 15 cm



Name \_\_\_\_\_

## Mental Math: Multiplication Patterns

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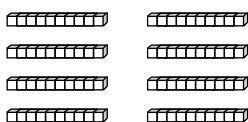
### Example

Find  $4 \times 200$ .

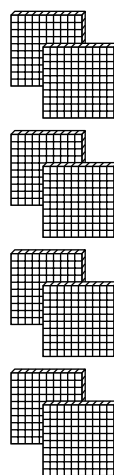
Think:  $4 \times 2 = 8$



Think:  $4 \times 20 = 80$



Think:  $4 \times 200 = 800$



---

Use the basic facts and patterns to find each product.

1.  $2 \times 3 =$  \_\_\_\_\_

2.  $3 \times 7 =$  \_\_\_\_\_

3.  $4 \times 5 =$  \_\_\_\_\_

$2 \times 30 =$  \_\_\_\_\_

$3 \times 70 =$  \_\_\_\_\_

$4 \times 50 =$  \_\_\_\_\_

$2 \times 300 =$  \_\_\_\_\_

$3 \times 700 =$  \_\_\_\_\_

$4 \times 500 =$  \_\_\_\_\_

4.  $7 \times 6 =$  \_\_\_\_\_

5.  $5 \times 9 =$  \_\_\_\_\_

6.  $3 \times 6 =$  \_\_\_\_\_

$7 \times 60 =$  \_\_\_\_\_

$5 \times 90 =$  \_\_\_\_\_

$3 \times 60 =$  \_\_\_\_\_

$7 \times 600 =$  \_\_\_\_\_

$5 \times 900 =$  \_\_\_\_\_

$3 \times 600 =$  \_\_\_\_\_

7.  $6 \times 4 =$  \_\_\_\_\_

8.  $8 \times 2 =$  \_\_\_\_\_

9.  $9 \times 7 =$  \_\_\_\_\_

$6 \times 40 =$  \_\_\_\_\_

$8 \times 20 =$  \_\_\_\_\_

$9 \times 70 =$  \_\_\_\_\_

$6 \times 400 =$  \_\_\_\_\_

$8 \times 200 =$  \_\_\_\_\_

$9 \times 700 =$  \_\_\_\_\_

Name \_\_\_\_\_

### **Mental Math: Multiplication Patterns** (continued)

Use basic facts and patterns to find each product.

**10.**  $5 \times 6 =$  \_\_\_\_\_      **11.**  $2 \times 7 =$  \_\_\_\_\_      **12.**  $9 \times 2 =$  \_\_\_\_\_

$5 \times 60 =$  \_\_\_\_\_       $2 \times 70 =$  \_\_\_\_\_       $9 \times 20 =$  \_\_\_\_\_

$5 \times 600 =$  \_\_\_\_\_       $2 \times 700 =$  \_\_\_\_\_       $9 \times 200 =$  \_\_\_\_\_

Find each product.

**13.** 
$$\begin{array}{r} 60 \\ \times 3 \\ \hline \end{array}$$

**14.** 
$$\begin{array}{r} 700 \\ \times 5 \\ \hline \end{array}$$

**15.** 
$$\begin{array}{r} 30 \\ \times 8 \\ \hline \end{array}$$

**16.** 
$$\begin{array}{r} 800 \\ \times 4 \\ \hline \end{array}$$

- 17. Math Reasoning** If  $12 \times 3 = 36$ , then what is  $12 \times 300$ ? \_\_\_\_\_

- 18.** Mark, Ryan, and Jenny are each collecting pennies for a school fundraiser. If each student collects 400 pennies, how many have they collected altogether? \_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

- 19.** A visit to the doctor costs \$40. A family of four has 5 visits during the month of January and 2 visits during the month of February. How much did they spend on doctor visits during January?

**A** \$200      **B** \$80      **C** \$1,600      **D** \$2,800      **E** NH

- 20.** A football player carried the ball 20 yards on each of 4 different plays. How far did he carry the ball?

**F** 80 yards      **G** 5 yards      **H** 800 yards      **J** 20 yards      **K** NH



Name \_\_\_\_\_

## Multiplying Two-Digit Numbers

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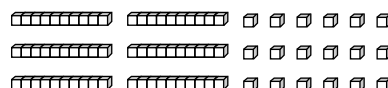
### Example

Find  $26 \times 3$ .

You can use base-ten blocks to find the product.

### Step 1

Think about 3 groups of 26.



### Step 2

Multiply the ones.

$$3 \times 6 \text{ ones} = 18 \text{ ones}$$

Regroup 18 ones as 1 ten and 8 ones.



### Step 3

Multiply the tens.

$$3 \times 2 \text{ tens} = 6 \text{ tens}$$

Add the 1 regrouped ten.

$$6 \text{ tens} + 1 \text{ ten} = 7 \text{ tens}$$

So,  $26 \times 3 = 78$ .



**1.** 
$$\begin{array}{r} 17 \\ \times 2 \\ \hline \end{array}$$

**2.** 
$$\begin{array}{r} 25 \\ \times 3 \\ \hline \end{array}$$

**3.** 
$$\begin{array}{r} 21 \\ \times 7 \\ \hline \end{array}$$

**4.** 
$$\begin{array}{r} 34 \\ \times 4 \\ \hline \end{array}$$

**5.** 
$$\begin{array}{r} 22 \\ \times 6 \\ \hline \end{array}$$

**6.** 
$$\begin{array}{r} 48 \\ \times 3 \\ \hline \end{array}$$

**7.** 
$$\begin{array}{r} 37 \\ \times 5 \\ \hline \end{array}$$

**8.** 
$$\begin{array}{r} 47 \\ \times 4 \\ \hline \end{array}$$

Name \_\_\_\_\_

**Multiplying Two-Digit Numbers** (continued)

**9.** 
$$\begin{array}{r} 14 \\ \times 6 \\ \hline \end{array}$$

**10.** 
$$\begin{array}{r} 18 \\ \times 3 \\ \hline \end{array}$$

**11.** 
$$\begin{array}{r} 23 \\ \times 4 \\ \hline \end{array}$$

**12.** 
$$\begin{array}{r} 31 \\ \times 5 \\ \hline \end{array}$$

**13.** 
$$\begin{array}{r} 27 \\ \times 7 \\ \hline \end{array}$$

**14.** 
$$\begin{array}{r} 43 \\ \times 4 \\ \hline \end{array}$$

**15.** 
$$\begin{array}{r} 52 \\ \times 2 \\ \hline \end{array}$$

**16.** 
$$\begin{array}{r} 65 \\ \times 3 \\ \hline \end{array}$$

**17.** 
$$\begin{array}{r} 57 \\ \times 5 \\ \hline \end{array}$$

**18.** 
$$\begin{array}{r} 62 \\ \times 3 \\ \hline \end{array}$$

**19.** 
$$\begin{array}{r} 75 \\ \times 3 \\ \hline \end{array}$$

**20.** 
$$\begin{array}{r} 37 \\ \times 8 \\ \hline \end{array}$$

**21. Algebra** Multiply in any order.

$7 \times 4 \times 3 = \underline{\hspace{2cm}}$

**22.** Ron is 26 years old. His grandmother is 3 times his age.  
How old is his grandmother?

\_\_\_\_\_

**23.** A basketball player usually scores 17 points in each game.  
How many points would he be expected to score in 5 games?

\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**24.** Find  $69 \times 4$ .

**A** 280

**B** 276

**C** 65

**D** 246

**E** NH

**25.** A square has 4 sides. Each side measures 36 inches. What is the perimeter of the square?

**F** 9 in.

**G** 144 in.

**H** 32 in.

**J** 108 in.

**K** NH

Name \_\_\_\_\_

## Multiplying Three-Digit Numbers

---

### Example

Find  $136 \times 4$ .

#### Step 1

Multiply the ones.

$$4 \times 6 \text{ ones} = 24 \text{ ones}$$

Regroup 24 ones as

2 tens and 4 ones.

$$\begin{array}{r} 136 \\ \times 4 \\ \hline 4 \end{array}$$

#### Step 2

Multiply the tens.

$$4 \times 3 \text{ tens} = 12 \text{ tens}$$

Add the 2 regrouped tens.

$$12 \text{ tens} + 2 \text{ tens} = 14 \text{ tens}$$

Regroup 14 tens as

1 hundred and 4 tens.

$$\begin{array}{r} 136 \\ \times 4 \\ \hline 44 \end{array}$$

#### Step 3

Multiply the hundreds.

$$4 \times 1 \text{ hundred} = 4 \text{ hundreds}$$

Add the 1 regrouped hundred.

$$4 \text{ hundreds} + 1 \text{ hundred} = 5 \text{ hundred}$$

$$\begin{array}{r} 136 \\ \times 4 \\ \hline 544 \end{array}$$

So,  $136 \times 4 = 544$ .

---

**1.**  $\begin{array}{r} 117 \\ \times 5 \\ \hline \end{array}$

**2.**  $\begin{array}{r} 225 \\ \times 3 \\ \hline \end{array}$

**3.**  $\begin{array}{r} 121 \\ \times 7 \\ \hline \end{array}$

**4.**  $\begin{array}{r} 434 \\ \times 4 \\ \hline \end{array}$

**5.**  $\begin{array}{r} 246 \\ \times 7 \\ \hline \end{array}$

**6.**  $\begin{array}{r} 519 \\ \times 2 \\ \hline \end{array}$

**7.**  $\begin{array}{r} 327 \\ \times 3 \\ \hline \end{array}$

**8.**  $\begin{array}{r} 118 \\ \times 6 \\ \hline \end{array}$

Name \_\_\_\_\_

**Multiplying Three-Digit Numbers** (continued)

**9.** 
$$\begin{array}{r} 572 \\ \times 5 \\ \hline \end{array}$$

**10.** 
$$\begin{array}{r} \$3.62 \\ \times 3 \\ \hline \end{array}$$

**11.** 
$$\begin{array}{r} 475 \\ \times 3 \\ \hline \end{array}$$

**12.** 
$$\begin{array}{r} 357 \\ \times 8 \\ \hline \end{array}$$

**13.** 
$$\begin{array}{r} \$2.14 \\ \times 6 \\ \hline \end{array}$$

**14.** 
$$\begin{array}{r} \$1.48 \\ \times 3 \\ \hline \end{array}$$

**15.** 
$$\begin{array}{r} 323 \\ \times 4 \\ \hline \end{array}$$

**16.** 
$$\begin{array}{r} 351 \\ \times 5 \\ \hline \end{array}$$

**17.** 
$$\begin{array}{r} 217 \\ \times 7 \\ \hline \end{array}$$

**18.** 
$$\begin{array}{r} 413 \\ \times 4 \\ \hline \end{array}$$

**19.** 
$$\begin{array}{r} 352 \\ \times 2 \\ \hline \end{array}$$

**20.** 
$$\begin{array}{r} \$6.51 \\ \times 3 \\ \hline \end{array}$$

**21. Mental Math** Find  $269 \times 1$ . \_\_\_\_\_

**22.** Ham is on sale for \$3.21 per pound and chicken is on sale for \$4.35 per pound. How much do 3 pounds of chicken cost? \_\_\_\_\_

**23.** A company makes 352 boxes of cereal each day. How many boxes are made in a week? \_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**24.** Find  $263 \times 4$ .

**A** 1,052

**B** 1,042

**C** 842

**D** 852

**E** NH

**25.** A triangle has 3 equal sides. Each side measures 118 inches. Find the perimeter.

**F** 334

**G** 121

**H** 360

**J** 354

**K** NH

Name \_\_\_\_\_

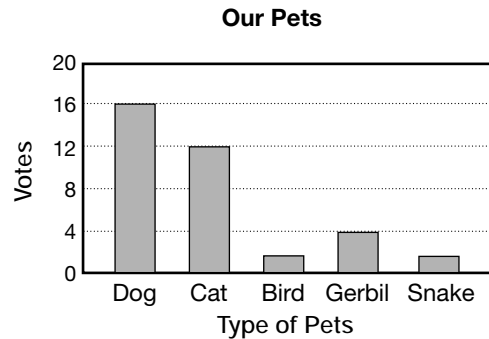
## Displaying Probability Data and Making Predictions

### Example

Use the bar graph at the right to answer the questions.

What does each bar on the graph show?

Each bar shows the number of each type of pet.



What pet is most common among these students?

Dog is the highest bar, so it is the most common.

What pet is the least common?

Bird and Snake are both the same height and are both the lowest bar, so must be the least common.

If you repeated the voting, what answer do you think would be the most common?

Dog.

Use the bar graph at the right for Questions 1–4.

1. What does each bar on the graph show?

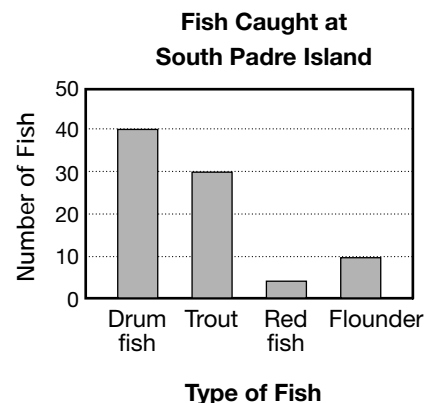
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2. What type of fish was caught most often?

\_\_\_\_\_

3. What type of fish was caught least often?

\_\_\_\_\_



4. If you went to South Padre Island and watched the boats come in, what kind of fish would you be most likely to see?

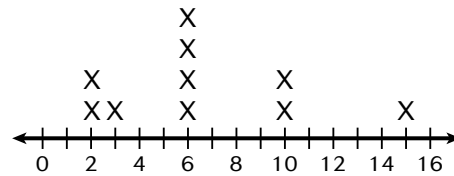
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Name \_\_\_\_\_

### Displaying Probability Data and Making Predictions (continued)

Use the line plot at the right for Questions 5–9.

5. What is the most common number of points scored by players on this basketball team?



6. What is the least common number of points scored by players on this basketball team?

7. How many players are represented by this line plot?

8. **Math Reasoning** Predict how many players out of 20 would score 10 points per game.

9. Use the following data to make a bar graph.

National Forest	Tally	Number
Angelina		4
Davy Crockett		12
Sabine		9
Sam Houston		6

**Test Prep** Choose the correct letter for the answer.

10. What does the length of the bars represent on the bar graph in Exercise 10?

- A** Number of National Forests                      **C** Number of votes  
**B** Number of students                                **D** Number of members

Name \_\_\_\_\_

## Place Value Through Millions

---

### Example 1

Write 705,637,023 in word form and in short word form.

Word form: seven hundred five million, six hundred thirty-seven thousand, twenty-three in standard form; Short word form: 705 million, 637 thousand, 23

### Example 2

Write the value of the underlined digit in 36,925,048. The underlined digit is in the millions place, so the value of the underlined digit is 6,000,000.

### Example 3

Write 21,304,201 in expanded form.

*Expanded form:*  $20,000,000 + 1,000,000 + 300,000 + 4,000 + 200 + 1$

---

Write each number in word form and in short word form.

1. 2,160,500 \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2. 91,207,040 \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. 510,200,450 \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

### Place Value Through Millions (continued)

Write the value of the underlined digit.

4. 4,562,398

\_\_\_\_\_

5. 15,347,025

\_\_\_\_\_

6. 37,814,956

\_\_\_\_\_

7. 526,878,953

\_\_\_\_\_

8. 782,354,065

\_\_\_\_\_

9. 918,403,760

\_\_\_\_\_

10. An underground rail system in Osaka, Japan carries 988,600,000 passengers per year. Write this number in expanded form.

\_\_\_\_\_

11. **Algebra** What missing number would make the number sentence  $3,589,000 = 3,000,000 + \blacksquare + 80,000 + 9,000$  true?

\_\_\_\_\_

12. **Math Reasoning** What number can be added to 999,990 to make 1,000,000?

\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

13. Which of the following gives the value of the underlined digit in the number 52,685,941?

**A** 5,000,000   **B** 50,000   **C** 500,000   **D** 50,000,000   **E** NH

14. The United States has about 147,200,000 car owners. Which of the following shows this number in expanded form?

**F**  $100,000 + 40,000 + 7,000 + 200$

**G**  $100,000,000 + 40,000,000 + 7,000,000 + 200,000$

**H**  $100,000,000 + 40,000,000 + 7,000 + 200$

**J**  $10,000,000 + 4,000,000 + 700,000 + 200$

Source: *Factastic Book of 1001 Lists*, Russell Ash, DK Publishing, 1999, pages 75, 71, and 67 respectively.



Name \_\_\_\_\_

## Comparing and Ordering Numbers

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### Example

Compare 15,685,200 and 15,676,200.

**Step 1** Line up the numbers to compare the digits.

15,6	8	5,200
15,6	7	6,200

↑      ↑  
same    different

The ten thousands digits are different.

**Step 2** Compare the ten thousands.

8 is more than 7, so  
15,685,200 is more than  
15,676,200.

You can write

$15,685,200 > 15,676,200$   
or  $15,676,200 < 15,685,200$ .

---

Compare. Use  $>$  or  $<$  for each ●.

1.  $365,485 \bullet 343,900$

2.  $5,681,400 \bullet 5,980,100$

3.  $7,410,910 \bullet 7,412,000$

4.  $12,085,900 \bullet 12,079,900$

5.  $29,000,700 \bullet 29,000,701$

6.  $243,150,000 \bullet 243,740,000$

7.  $918,456,661 \bullet 918,423,701$

8.  $405,744,581 \bullet 405,744,568$

Order the numbers from greatest to least.

9. 518,681; 51,995; 5,094,156; 5,814

\_\_\_\_\_

10. 8,205,319; 8,371,000; 80,570,000; 8,201,415

\_\_\_\_\_

11. 21,879,400; 218,794,000; 21,870,500; 2,999,900

\_\_\_\_\_

12. 975,041,700; 970,590,800; 97,900,599; 985,000,000

\_\_\_\_\_

Name \_\_\_\_\_

### Comparing and Ordering Numbers (continued)

Compare. Use  $>$  or  $<$  for each  $\bullet$ .

**13.** 1,689,000  $\bullet$  1,679,000

**14.** 43,914,500  $\bullet$  43,925,000

**15.** 62,441,300  $\bullet$  62,329,500

**16.** 518,495,000  $\bullet$  517,954,000

Order the numbers from greatest to least.

**17.** 96,500; 8,400,509; 8,946,000; 81,000,900

**18.** 746,589,415; 497,956,881; 749,300,000; 719,995,800

Use the table at the right for Exercises 19–21.

**19.** Which country is largest in population?

\_\_\_\_\_

**20.** Which country is least populated?

\_\_\_\_\_

**21.** Which country has the greater population, Peru or Venezuela?

\_\_\_\_\_

Populations	
Argentina	36,202,000
Bolivia	7,680,000
Brazil	169,545,000
Chile	14,996,000
Colombia	39,172,000
Peru	26,198,000
Venezuela	23,596,000
Note: Source: Factastic Book of 1001 Lists	

**Test Prep** Choose the correct letter for each answer.

**22.** Which number is greatest?

**A** 59,814,000

**C** 5,999,900

**B** 59,819,000

**D** 500,000,000

**23.** Which of these four countries has the smallest area? Brazil, 3,286,472 square miles; Canada, 3,851,788 square miles; China, 3,704,426 square miles; U.S., 3,617,827 square miles

**F** Brazil

**G** Canada

**H** China

**J** U.S.

**K** NH

Name \_\_\_\_\_

## Rounding Numbers

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### Example 1

Round 79,485,360 to the nearest hundred thousand.

**Step 1** Find the hundred thousands place.

79,485,360

79,485,360 rounds to 79,500,000

**Step 2** Look at the digit to the right.



79,485,360

**Step 3** If the digit to the right is less than 5, round down. If the digit is 5 or greater, round up.

Since  $8 > 5$ , increase the hundred thousands place by 1.

### Example 2

Round 341,718,300 to the underlined place.

**Step 1** The underlined digit is in the thousands place.

341,718,300

341,718,300 rounds to 341,718,000

**Step 2** Look at the digit to the right.



341,718,300

**Step 3** If the digit to the right is less than 5, round down. If the digit is 5 or greater, round up.

Since  $3 < 5$ , keep the thousands place the same.

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Round each number to the nearest ten, hundred, thousand, ten thousand, and hundred thousand.

**1.** 537,681

**2.** 1,581,267

**3.** 4,075,418

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Name \_\_\_\_\_

### **Rounding Numbers** (continued)

Round each number to the nearest ten.

- 4.** 94,519 \_\_\_\_\_ **5.** 3,194,764 \_\_\_\_\_

Round each number to the nearest hundred.

- 6.** 968,458 \_\_\_\_\_ **7.** 1,265,906 \_\_\_\_\_

Round each number to the nearest thousand.

- 8.** 318,512 \_\_\_\_\_ **9.** 26,906,294 \_\_\_\_\_

Round each number to the nearest ten thousand.

- 10.** 7,514,600 \_\_\_\_\_ **11.** 82,437,894 \_\_\_\_\_

Round each number to the nearest hundred thousand.

- 12.** 21,561,300 \_\_\_\_\_ **13.** 485,629,800 \_\_\_\_\_

Round each number to the underlined place.

- 14.** 125,495 \_\_\_\_\_ **15.** 7,539,461 \_\_\_\_\_ **16.** 42,561,735 \_\_\_\_\_

- 17.** China has 124,212,400 children in primary school.  
To the nearest hundred thousand, how many children is this? \_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

- 18.** Round 42,547,816 to the nearest ten thousand.

- A** 42,540,000 **C** 42,500,000 **E** NH  
**B** 42,548,000 **D** 42,550,000

- 19.** The earth is 12,756 kilometers in diameter across the equator. Round this number to the nearest hundred.

- F** 12,700 **G** 12,800 **H** 12,760 **J** 13,000 **K** NH

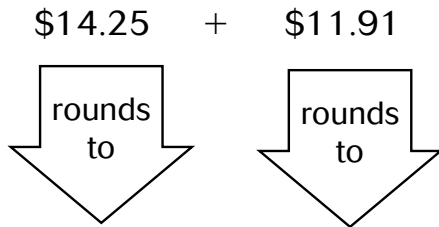
Name \_\_\_\_\_

## Estimating Sums and Differences

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### Example 1

Estimate  $\$14.25 + \$11.91$ .



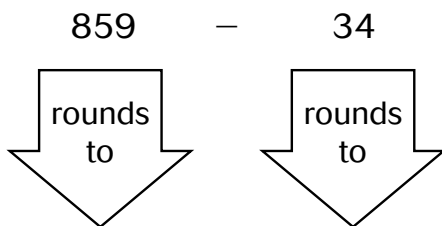
Round to the nearest dollar.

If there are 50¢ or more, round up to the next dollar. If there are less than 50¢, keep the number of dollars the same.

$$\$14.00 + \$12.00 = \$26.00$$

### Example 2

Estimate  $859 - 34$ .



When the numbers have a different number of digits, round to the greatest place value of the smallest number.

$$860 - 30 = 830$$

---

Estimate each sum or difference.

**1.**  $\begin{array}{r} 39 \\ + 15 \\ \hline \end{array}$

**2.**  $\begin{array}{r} 61 \\ - 22 \\ \hline \end{array}$

**3.**  $\begin{array}{r} 492 \\ + 147 \\ \hline \end{array}$

**4.**  $\begin{array}{r} 816 \\ - 278 \\ \hline \end{array}$

**5.**  $\begin{array}{r} \$6.95 \\ + 2.43 \\ \hline \end{array}$

**6.**  $\begin{array}{r} \$9.05 \\ - 2.89 \\ \hline \end{array}$

**7.**  $\begin{array}{r} 5,490 \\ + 2,601 \\ \hline \end{array}$

**8.**  $\begin{array}{r} 8,195 \\ - 3,513 \\ \hline \end{array}$

**9.**  $\begin{array}{r} \$21.18 \\ + 10.56 \\ \hline \end{array}$

**10.**  $\begin{array}{r} 264 \\ + 19 \\ \hline \end{array}$

**11.**  $\begin{array}{r} 327 \\ - 16 \\ \hline \end{array}$

**12.**  $\begin{array}{r} \$19.45 \\ - 8.38 \\ \hline \end{array}$

**13.**  $\begin{array}{r} 7,641 \\ - 194 \\ \hline \end{array}$

**14.**  $\begin{array}{r} 9,719 \\ - 556 \\ \hline \end{array}$

**15.**  $\begin{array}{r} 43,500 \\ - 2,800 \\ \hline \end{array}$

Name \_\_\_\_\_

### Estimating Sums and Differences (continued)

Estimate each sum or difference.

<b>16.</b>	$\begin{array}{r} 46 \\ + 39 \\ \hline \end{array}$	<b>17.</b>	$\begin{array}{r} 812 \\ + 105 \\ \hline \end{array}$	<b>18.</b>	$\begin{array}{r} 84 \\ - 57 \\ \hline \end{array}$	<b>19.</b>	$\begin{array}{r} \$9.85 \\ - 5.47 \\ \hline \end{array}$	<b>20.</b>	$\begin{array}{r} 4,605 \\ + 2,941 \\ \hline \end{array}$
------------	-----------------------------------------------------	------------	-------------------------------------------------------	------------	-----------------------------------------------------	------------	-----------------------------------------------------------	------------	-----------------------------------------------------------

<b>21.</b>	$\begin{array}{r} \$62.41 \\ + 18.05 \\ \hline \end{array}$	<b>22.</b>	$\begin{array}{r} 439 \\ + 27 \\ \hline \end{array}$	<b>23.</b>	$\begin{array}{r} \$25.89 \\ - 3.25 \\ \hline \end{array}$	<b>24.</b>	$\begin{array}{r} 7,475 \\ + 236 \\ \hline \end{array}$	<b>25.</b>	$\begin{array}{r} 36,900 \\ - 1,300 \\ \hline \end{array}$
------------	-------------------------------------------------------------	------------	------------------------------------------------------	------------	------------------------------------------------------------	------------	---------------------------------------------------------	------------	------------------------------------------------------------

**26.** Rohit plans to buy a new tennis racket. He has saved \$12.58 so far. The racket costs \$27.95. About how much more money does he need to save? \_\_\_\_\_

**27.** Leigh Ann wants to buy a tennis racket for \$34.95 and a can of tennis balls for \$2.29. About how much will they cost her? \_\_\_\_\_

**28. Math Reasoning** What is the largest number that can be added to 37 so that, when the addends are rounded, the estimated sum is 90? \_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**29.** Estimate the sum. 
$$\begin{array}{r} \$6.45 \\ + 2.64 \\ \hline \end{array}$$

**A** \$8.00      **B** \$9.00      **C** \$10.00      **D** \$4.00      **E** NH

**30.** Jeri and her family traveled 485 miles on the first day of their vacation and 324 miles on the second day. About how many miles did they travel?

**F** 600      **G** 700      **H** 800      **J** 900      **K** NH

Name \_\_\_\_\_

## Subtracting Across Zeros

### Example

Find  $5,000 - 2,864$ .

There are no ones, tens, or hundreds. So these columns must be regrouped.

**Step 1** Regroup  
1 thousand as  
10 hundreds.

$$\begin{array}{r} 4\overset{10}{\cancel{5}},000 \\ - 2,864 \\ \hline \end{array}$$

**Step 2** Regroup  
1 hundred as  
10 tens.

$$\begin{array}{r} 9\overset{10}{\cancel{4}}\overset{10}{\cancel{0}}0 \\ - 2,864 \\ \hline \end{array}$$

**Step 3** Regroup  
1 ten as 10 ones.

$$\begin{array}{r} 9\overset{9}{\cancel{10}}\overset{10}{\cancel{0}}\overset{10}{\cancel{0}} \\ - 2,864 \\ \hline \end{array}$$

**Step 4** Subtract.

$$\begin{array}{r} 99\overset{10}{\cancel{10}}\overset{10}{\cancel{0}}\overset{10}{\cancel{0}} \\ - 2,864 \\ \hline 2,136 \end{array}$$

Check by adding:

$$\begin{array}{r} 5,000 \\ - 2,864 \\ \hline 2,136 \end{array} \quad \begin{array}{r} 2,136 \\ + 2,864 \\ \hline 5,000 \end{array}$$

You can also check by estimating:  $5,000 - 3,000 = 2,000$ .  
The answer is reasonable because 2,136 is close to 2,000.

**1.**  $\begin{array}{r} 300 \\ - 179 \\ \hline \end{array}$

**2.**  $\begin{array}{r} 500 \\ - 483 \\ \hline \end{array}$

**3.**  $\begin{array}{r} 9,000 \\ - 612 \\ \hline \end{array}$

**4.**  $\begin{array}{r} 7,000 \\ - 1,294 \\ \hline \end{array}$

**5.**  $\begin{array}{r} 3,000 \\ - 1,847 \\ \hline \end{array}$

**6.**  $\begin{array}{r} 5,000 \\ - 4,105 \\ \hline \end{array}$

**7.**  $\begin{array}{r} 6,000 \\ - 3,450 \\ \hline \end{array}$

**8.**  $\begin{array}{r} 2,000 \\ - 999 \\ \hline \end{array}$

**9.**  $\begin{array}{r} 1,000 \\ - 165 \\ \hline \end{array}$

**10.**  $\begin{array}{r} 12,000 \\ - 5,514 \\ \hline \end{array}$

**11.**  $40,008 - 6,193$

**12.**  $8,000 - 2,140$

**13.**  $5,000 - 3,451$

Name \_\_\_\_\_

**Subtracting Across Zeros** (continued)

**14.** 
$$\begin{array}{r} 900 \\ - 465 \\ \hline \end{array}$$
      **15.** 
$$\begin{array}{r} 200 \\ - 146 \\ \hline \end{array}$$
      **16.** 
$$\begin{array}{r} 1,000 \\ - 843 \\ \hline \end{array}$$
      **17.** 
$$\begin{array}{r} 5,030 \\ - 1,945 \\ \hline \end{array}$$
      **18.** 
$$\begin{array}{r} 9,400 \\ - 3,895 \\ \hline \end{array}$$

**19.** 
$$\begin{array}{r} 6,000 \\ - 4,163 \\ \hline \end{array}$$
      **20.** 
$$\begin{array}{r} 2,000 \\ - 1,406 \\ \hline \end{array}$$
      **21.** 
$$\begin{array}{r} 8,000 \\ - 5,473 \\ \hline \end{array}$$
      **22.** 
$$\begin{array}{r} 30,000 \\ - 20,721 \\ \hline \end{array}$$
      **23.** 
$$\begin{array}{r} 70,000 \\ - 43,563 \\ \hline \end{array}$$

**24.**  $3,050 - 2,173$       **25.**  $5,000 - 2,763$       **26.**  $10,000 - 8,916$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**27.** Jonna is reading a 300 page book. So far she has read 179 pages. How many pages does she have left to read?

\_\_\_\_\_

**28.** A town with a population of 12,000 has 1,956 of its residents who regularly use 3 exercise facilities. How many residents do not use an exercise facility?

\_\_\_\_\_

**29. Mental Math** Find  $10,000 - 9,999$ .

\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**30.** Find  $6,000 - 3,578$ .

**A** 3,578      **B** 2,578      **C** 3,422      **D** 2,422      **E** NH

**31.** A basketball arena has 5,000 seats. If a crowd of 4,135 people attend a game, how many seats are empty?

**F** 1,135      **G** 865      **H** 135      **J** 1,865      **K** NH



Name \_\_\_\_\_

## Mental Math Strategies

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### Example 1

Use breaking apart to find  $487 - 254$ .

Think:  $487 = 400 + 80 + 7$

$254 = 200 + 50 + 4$

Subtract the  
hundreds.

Subtract  
the tens.

Subtract  
the ones.

Add the  
differences of  
the hundreds,  
tens, and ones.

$$\begin{array}{r} 400 \\ - 200 \\ \hline 200 \end{array}$$

$$\begin{array}{r} 80 \\ - 50 \\ \hline 30 \end{array}$$

$$\begin{array}{r} 7 \\ - 4 \\ \hline 3 \end{array}$$

$$\begin{array}{r} 200 \\ 30 \\ + 3 \\ \hline 233 \end{array}$$

### Example 2

Use compensation to find  $298 + 124$ .

Add 2 to 298 to make 300.

$$\begin{array}{r} 298 \quad \rightarrow \quad 300 \\ + 124 \\ \hline 424 \\ - 2 \\ \hline 422 \end{array}$$

Subtract 2 from the sum to compensate  
for adding 2.

---

Add or subtract mentally. Use breaking apart.

**1.**  $45 + 23$

\_\_\_\_\_

**2.**  $79 - 52$

\_\_\_\_\_

**3.**  $465 - 133$

\_\_\_\_\_

**4.**  $821 + 115$

\_\_\_\_\_

Add or subtract mentally. Use compensation.

**5.**  $674 + 198$

\_\_\_\_\_

**6.**  $550 - 399$

\_\_\_\_\_

**7.**  $7,000 - 1,995$

\_\_\_\_\_

**8.**  $2,346 + 497$

\_\_\_\_\_

Name \_\_\_\_\_

### **Mental Math Strategies** (continued)

Add or subtract mentally. Use breaking apart.

**9.**  $27 + 36$

\_\_\_\_\_

**10.**  $45 - 21$

\_\_\_\_\_

**11.**  $786 - 213$

\_\_\_\_\_

**12.**  $574 - 162$

\_\_\_\_\_

**13.**  $341 + 457$

\_\_\_\_\_

**14.**  $2,574 - 451$

\_\_\_\_\_

**15.**  $6,655 - 2,345$

\_\_\_\_\_

**16.**  $8,751 + 1,246$

\_\_\_\_\_

Add or subtract mentally. Use compensation.

**17.**  $198 + 225$

\_\_\_\_\_

**18.**  $300 - 195$

\_\_\_\_\_

**19.**  $654 + 297$

\_\_\_\_\_

**20.**  $850 - 396$

\_\_\_\_\_

**21.**  $760 - 99$

\_\_\_\_\_

**22.**  $5,600 - 499$

\_\_\_\_\_

**23.**  $2,574 + 1,999$

\_\_\_\_\_

**24.**  $7,494 + 396$

\_\_\_\_\_

**25. Math Reasoning** Would breaking apart be the best method for the mental subtraction problem  $61 - 28$ ? Explain.

\_\_\_\_\_  
\_\_\_\_\_

**26. Math Reasoning** Would compensation be the best method for the mental subtraction problem  $45 - 23$ ? Explain.

\_\_\_\_\_  
\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**27.** Subtract mentally by breaking apart.  $657 - 241$

**A** 416

**B** 898

**C** 516

**D** 398

**E** NH

**28.** A new computer will cost Antonio \$998. A printer will cost \$253. Use mental math to find the total cost for a computer and printer.

**F** \$1,253

**G** \$1,251

**H** \$1,255

**J** \$745

**K** NH

Name \_\_\_\_\_

## Parts of a Region

---

### Example

Write the fraction for the shaded part of the region.

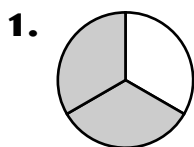


$$\frac{2}{5} = \frac{\text{number of equal parts shaded}}{\text{total number of equal parts}}$$

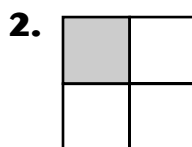
So,  $\frac{2}{5}$  of the region is shaded.

---

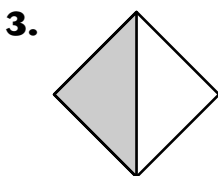
Write the fraction for the shaded parts of each region.



\_\_\_\_\_



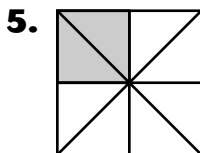
\_\_\_\_\_



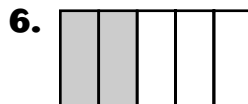
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



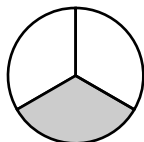
\_\_\_\_\_

Name \_\_\_\_\_

### Parts of a Region (continued)

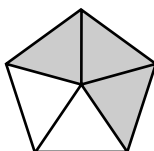
Write the fraction for the shaded parts of each region.

7.



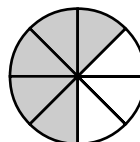
\_\_\_\_\_

8.



\_\_\_\_\_

9.



\_\_\_\_\_

Draw a picture to show each fraction.

10.  $\frac{1}{5}$

11.  $\frac{2}{3}$

12.  $\frac{7}{8}$

13.  $\frac{4}{7}$

14.  $\frac{5}{8}$

15.  $\frac{6}{6}$

16.  $\frac{2}{8}$

17.  $\frac{4}{5}$

**18. Math Reasoning** Draw a picture to show  $\frac{1}{3}$ . Then divide each of the parts in half. What fraction of the parts does the  $\frac{1}{3}$  represent now?

\_\_\_\_\_

**19.** Ben divided a pie into 8 equal pieces and ate 3 of them. How much of the pie remains?

\_\_\_\_\_

**Test Prep** Choose the correct letter for the answer.

**20.** There are 4 yards the same size on Ramsey Street. Three of the yards were mowed today. How much of Ramsey Street was left unmowed?

**A**  $\frac{3}{4}$

**B**  $\frac{1}{4}$

**C**  $\frac{4}{3}$

**D**  $\frac{1}{3}$

Name \_\_\_\_\_

## Parts of a Set

---

### Example

Write the fraction for the shaded parts of the set.



$$\frac{2}{7} = \frac{\text{number of shaded shapes}}{\text{total number of shapes}}$$

So,  $\frac{2}{7}$  of the region is shaded.

---

Write the fraction for the shaded parts of each set.



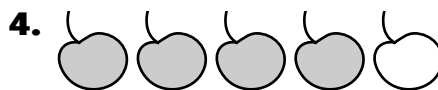
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

Name \_\_\_\_\_

**Parts of a Set** (continued)

Write the fraction for the shaded parts of each set.



\_\_\_\_\_

\_\_\_\_\_

Draw a set of shapes and shade them to show each fraction.

9.  $\frac{6}{8}$

10.  $\frac{2}{7}$

11.  $\frac{5}{9}$

12.  $\frac{6}{10}$

13.  $\frac{5}{8}$

14.  $\frac{4}{9}$

**Test Prep** Choose the correct letter for the answer.

15. Find  $\frac{1}{4}$  of 12.

**A** 3

**B** 4

**C** 9

**D** 8

Name \_\_\_\_\_

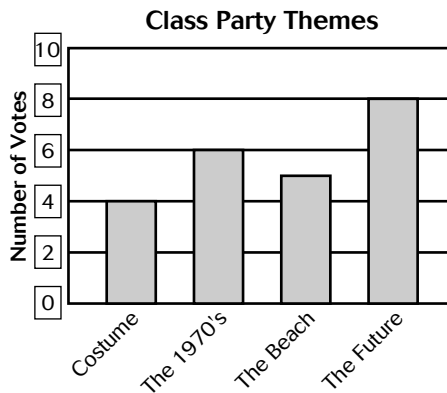
## Making a Bar Graph

### Example

Greta's class is voting on themes for class parties. Make a horizontal bar graph to display the data in the table:

First draw and label the side and the bottom of the graph. Use a scale that begins at 0 and goes beyond the highest number in the data. Draw bars on the graph that show the number of students who voted for each theme. Choose a title for your graph.

Theme	Tally	Number
Costume		4
The 1970s		6
The Beach		5
The Future		8



In the bar graph to the left, the longest bar shows that "The Future" received the most votes as Class Party Theme. The shortest bar shows that "Costume" received the least number of votes.

Use the horizontal bar graph shown at the right.

1. Which craft did most students say was their favorite?

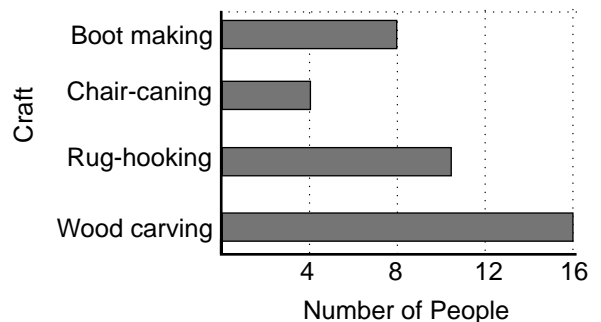
\_\_\_\_\_

2. How many students chose boot making as their favorite craft demonstration?

\_\_\_\_\_

3. How many more students chose wood carving than chose chair-caning as their favorite demonstration?

**Favorite Crafts**



Name \_\_\_\_\_

### Making a Bar Graph (continued)

4. Make a horizontal bar graph to display the data in the table.

Pizza Toppings Choices

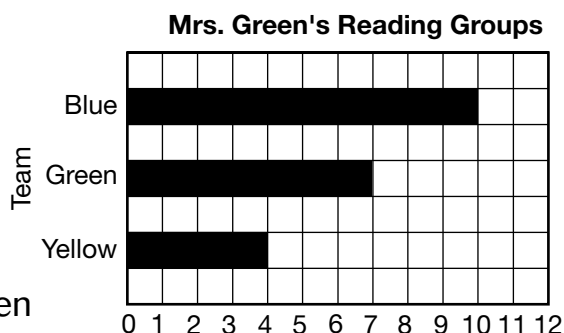
Topping	Votes	Topping	Votes
Pepperoni	30	Onions	20
Mushrooms	40	Olives	4
Sausage	75	Peppers	35

Use the bar graph you made in Exercise 4.

5. Which topping was chosen the least? \_\_\_\_\_
6. How many more people chose peppers over pepperoni? \_\_\_\_\_
7. **Mental Math** Which bar is twice as long as the bar for onions? What does that mean?
- \_\_\_\_\_

### Test Prep Choose the correct letter for each answer.

Mrs. Green divided her class into three reading teams. She created a bar graph to chart the number of books each group read.



8. What is the best label for the bottom of the graph?
- A** Number of Books read by Mrs. Green
- B** Team
- C** Books
- D** Number of Books read by the Yellow Team
9. How many more books did the Blue Team read than the Yellow Team?

**F** 3

**G** 6

**H** 10

**J** 4



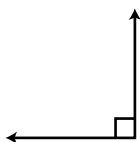
Name \_\_\_\_\_

## Points, Lines, Segments, Rays, and Angles

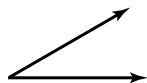
---

### Example 1

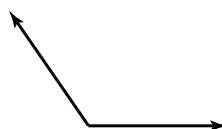
Tell what type of angle is shown.



This is a **right angle**.



This is an **acute angle**. It is less than a right angle.



This is an **obtuse angle**. It is greater than a right angle.



This is a **straight angle**. It forms a straight line.

### Example 2

Tell what type of lines are shown.



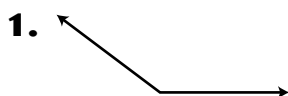
The two lines do not intersect.



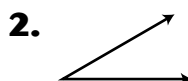
They are **parallel lines**.

---

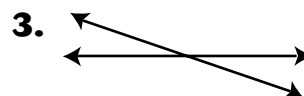
Tell what type of figure is shown.



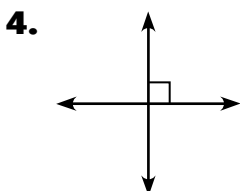
\_\_\_\_\_  
\_\_\_\_\_



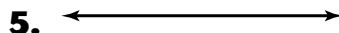
\_\_\_\_\_  
\_\_\_\_\_



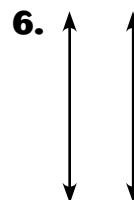
\_\_\_\_\_  
\_\_\_\_\_



\_\_\_\_\_  
\_\_\_\_\_



\_\_\_\_\_  
\_\_\_\_\_

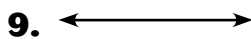
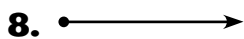
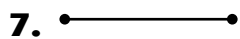


\_\_\_\_\_  
\_\_\_\_\_

Name \_\_\_\_\_

# **Points, Lines, Segments, Rays, and Angles (continued)**

Tell what type of figure is shown.



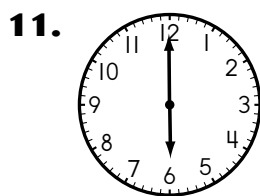
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

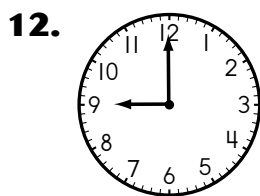
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

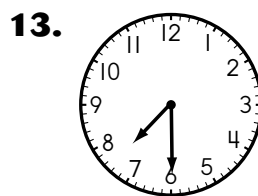
Name the angle formed by each clock's hands.



\_\_\_\_\_  
\_\_\_\_\_



\_\_\_\_\_  
\_\_\_\_\_



\_\_\_\_\_  
\_\_\_\_\_

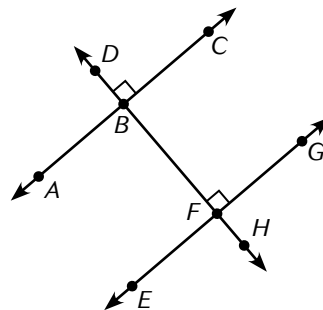
Refer to the drawing at the right.  
Name an example of each figure described below.

**14.** line \_\_\_\_\_

**15.** ray \_\_\_\_\_

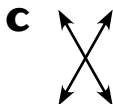
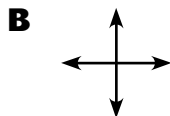
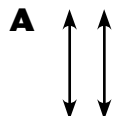
**16.** right angle \_\_\_\_\_

**17.** perpendicular lines \_\_\_\_\_



**Test Prep** Choose the correct letter for the answer.

**18.** Which figure shows parallel lines?



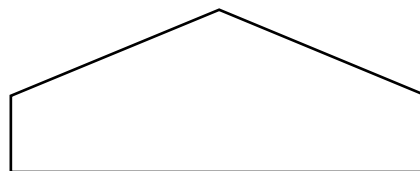
Name \_\_\_\_\_

## Polygons

### Example 1

What type of figure is shown at the right?

The figure is a polygon. It has 5 sides, so it is a pentagon.



### Example 2

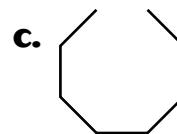
Explain why these figures are not polygons.



This figure is not a polygon because it is not made up of all line segments.

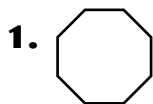


This figure is not a polygon because the line segments do not intersect only at their endpoints.

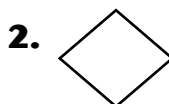


This figure is not a polygon because it is not closed.

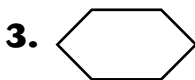
Identify each polygon.



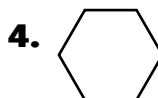
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

Tell if the figure is a polygon. Write *yes* or *no*.



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

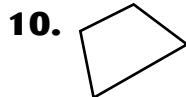
Name \_\_\_\_\_

### Polygons (continued)

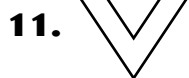
Tell if the figure is a polygon. Write *yes* or *no*. If it is a polygon, write its name.

9. **D**

\_\_\_\_\_



\_\_\_\_\_

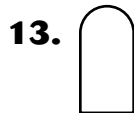


\_\_\_\_\_



\_\_\_\_\_

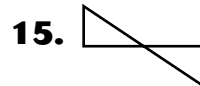
Explain why the figure is not a polygon.



\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**16. Math Reasoning** What is the least number of sides a polygon can have?

\_\_\_\_\_

**17. Math Reasoning** Can a polygon have more than 8 sides? Explain.

\_\_\_\_\_  
\_\_\_\_\_

**Test Prep** Choose the correct letter for the answer.

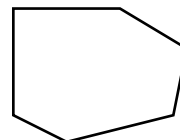
**18.** What is the name of this figure?

**A** Quadrilateral

**C** Hexagon

**B** Pentagon

**D** Octagon



Name \_\_\_\_\_

## Temperature

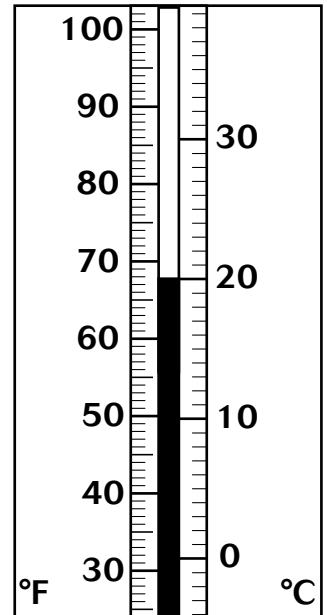
### Example 1

Find the temperature shown on the thermometer in degrees Fahrenheit and degrees Celsius.

Using customary units, the temperature is 68 degrees Fahrenheit, or 68° F.

Using metric units, the temperature is 20 degrees Celsius, or 20°C.

This is the standard room temperature.



### Example 2

Which temperature is cooler,  $-10^{\circ}\text{C}$  or  $-10^{\circ}\text{F}$ ?

You can use the thermometer to compare these temperatures.

Since  $-10^{\circ}\text{F}$  is lower on the thermometer than  $-10^{\circ}\text{C}$ ,  $-10^{\circ}\text{F}$  is the lower temperature.

Use the thermometer above to write the equivalent temperature in degrees Fahrenheit or degrees Celsius.

1. 59°F

\_\_\_\_\_

2. 25°C

\_\_\_\_\_

3.  $-2^{\circ}\text{C}$

\_\_\_\_\_

4. 46°F

\_\_\_\_\_

5. 41°F

\_\_\_\_\_

6. 38°C

\_\_\_\_\_

7. 72°F

\_\_\_\_\_

8. 8°C

\_\_\_\_\_

9. 29°C

\_\_\_\_\_

10. 50°F

\_\_\_\_\_

11. 39°C

\_\_\_\_\_

12. 86°F

\_\_\_\_\_

Name \_\_\_\_\_

## Temperature (continued)

Use the thermometer on page 115. Write the equivalent temperature in degrees Fahrenheit or degrees Celsius.

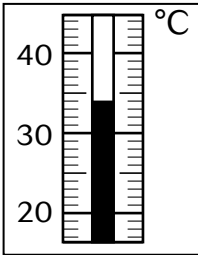
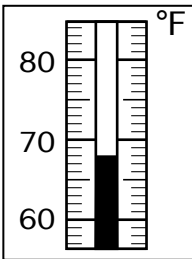
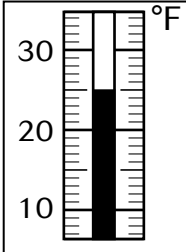
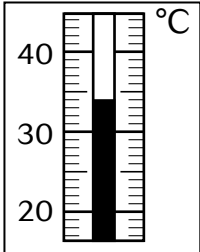
- |                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|
| <b>13.</b> 30°C | <b>14.</b> 32°F | <b>15.</b> 35°C | <b>16.</b> 95°F |
| _____           | _____           | _____           | _____           |
| <b>17.</b> 64°F | <b>18.</b> 36°F | <b>19.</b> 15°C | <b>20.</b> -2°C |
| _____           | _____           | _____           | _____           |

Choose the most appropriate temperature in Exercises 21–24. The table at the right provides some information that may be helpful.

- |                                       |                                      |
|---------------------------------------|--------------------------------------|
| <b>21.</b> hot coffee<br>70°F or 70°C | <b>22.</b> cold milk<br>0°F or 4°C   |
| <b>23.</b> a warm day<br>75°F or 75°C | <b>24.</b> a cool day<br>5°F or 10°C |

	°F	°C
Water boils	212	100
Normal body temperature	98.6	37
Room temperature	68	20
Water freezes	32	0

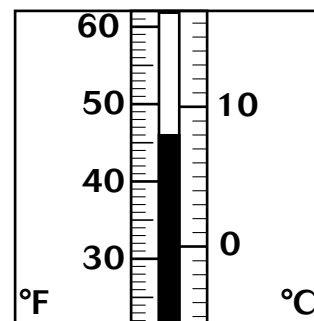
Read each thermometer. Write the temperature in °F or °C.

- |                                                                                                |                                                                                                |                                                                                                 |                                                                                                  |
|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <b>25.</b>  | <b>26.</b>  | <b>27.</b>  | <b>28.</b>  |
| _____                                                                                          | _____                                                                                          | _____                                                                                           | _____                                                                                            |

**Test Prep** Choose the correct letter for the answer.

- 29.** Using the thermometer at the right, which temperature is equivalent to 46°F?

- |              |               |
|--------------|---------------|
| <b>A</b> 4°C | <b>C</b> 8°C  |
| <b>B</b> 6°C | <b>D</b> 10°C |



Name \_\_\_\_\_

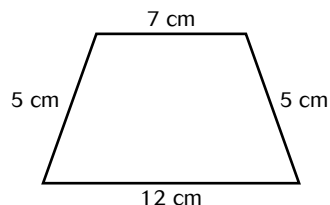
## Perimeter

### Example

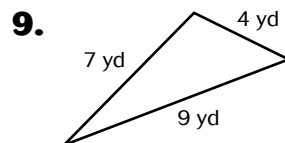
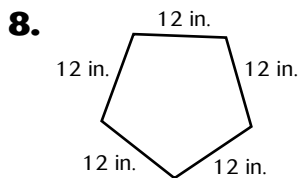
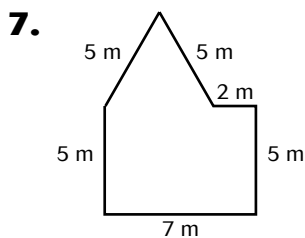
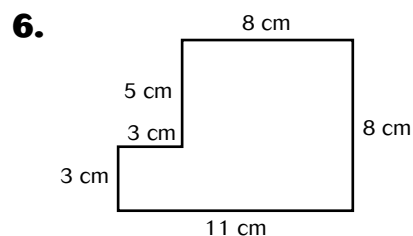
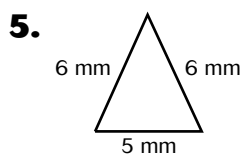
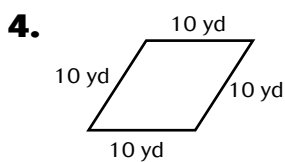
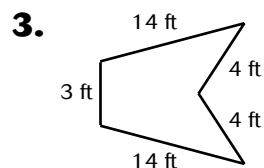
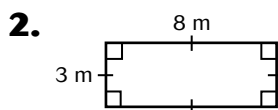
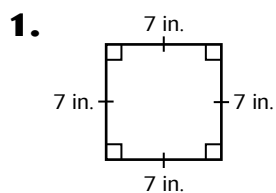
Find the perimeter of the figure at the right.

$$\begin{aligned}\text{Perimeter} &= 7 \text{ cm} + 12 \text{ cm} + 5 \text{ cm} + 5 \text{ cm} \\ &= 29 \text{ cm}\end{aligned}$$

The perimeter of the figure is 29 centimeters.



Find the perimeter of each figure.



Name \_\_\_\_\_

### Perimeter (continued)

Find the perimeter of the rectangle with the given dimensions.

**10.**  $l = 9 \text{ mm}$ ,  $w = 12 \text{ mm}$

\_\_\_\_\_

**11.**  $l = 13 \text{ in.}$ ,  $w = 14 \text{ in.}$

\_\_\_\_\_

**12.**  $l = 2 \text{ ft}$ ,  $w = 15 \text{ ft}$

\_\_\_\_\_

**13.**  $l = 17 \text{ cm}$ ,  $w = 25 \text{ cm}$

\_\_\_\_\_

**14.**  $l = 42 \text{ m}$ ,  $w = 30 \text{ m}$

\_\_\_\_\_

**15.**  $l = 1 \text{ yd}$ ,  $w = 14 \text{ yd}$

\_\_\_\_\_

Find the perimeter of the square with the given side.

**16.**  $s = 2 \text{ yd}$

\_\_\_\_\_

**17.**  $s = 10 \text{ in.}$

\_\_\_\_\_

**18.**  $s = 31 \text{ km}$

\_\_\_\_\_

**19.**  $s = 11 \text{ m}$

\_\_\_\_\_

**20.** The perimeter of a rhombus is 52 millimeters. What is the length of each side?

\_\_\_\_\_

**21.** A rectangle has a perimeter of 70 hectometers. The width of the rectangle is 14 hectometers. Find the length of the rectangle.

\_\_\_\_\_

**22.** An equilateral triangle has a perimeter of 153 feet. What is the length of each side?

\_\_\_\_\_

**23.** Mariah has a rectangular garden. The garden is twice as long as it is wide. If the perimeter of the garden is 84 meters, find the rectangle's dimensions.

\_\_\_\_\_

**Test Prep** Choose the correct letter for the answer.

**24.** Find the perimeter of a rectangle with a length of 16 yards and a width of 4 yards.

**A** 20 yd

**B** 24 yd

**C** 30 yd

**D** 40 yd



Name \_\_\_\_\_

## Mental Math: Using Compatible Numbers and Compensation

---

### Example 1

Find  $13 + 21 + 37$ .

Look for compatible numbers.

$$\begin{array}{c} \swarrow \quad \searrow \\ 13 + 21 + 37 = 50 + 21 \end{array}$$

Add these numbers first.

$$= 71$$

### Example 2

Find  $67 + 28$ .

Use compensation to adjust both numbers.

$$\begin{array}{r} 67 \\ + 28 \\ \hline \end{array} \quad \begin{array}{l} \text{Subtract 2} \\ \text{to adjust.} \\ \text{Add 2} \\ \text{to adjust.} \end{array} \quad \begin{array}{r} 65 \\ + 30 \\ \hline 95 \end{array}$$

---

Use mental math to find each sum or difference.

1.  $15 + 45 + 7$

\_\_\_\_\_

2.  $38 + 16 + 12$

\_\_\_\_\_

3.  $39 + 38 + 11$

\_\_\_\_\_

4.  $58 + 9 + 22$

\_\_\_\_\_

5.  $13 + 19 + 41$

\_\_\_\_\_

6.  $7 + 23 + 8$

\_\_\_\_\_

7.  $\begin{array}{r} 54 \\ + 18 \\ \hline \end{array}$

8.  $\begin{array}{r} 29 \\ + 24 \\ \hline \end{array}$

9.  $\begin{array}{r} 43 \\ + 51 \\ \hline \end{array}$

10.  $\begin{array}{r} 77 \\ - 38 \\ \hline \end{array}$

11.  $\begin{array}{r} 53 \\ - 19 \\ \hline \end{array}$

12.  $\begin{array}{r} 96 \\ - 89 \\ \hline \end{array}$

13.  $\begin{array}{r} 33 \\ + 49 \\ \hline \end{array}$

14.  $\begin{array}{r} 18 \\ + 36 \\ \hline \end{array}$

15.  $\begin{array}{r} 46 \\ + 9 \\ \hline \end{array}$

16.  $\begin{array}{r} 61 \\ - 43 \\ \hline \end{array}$

17.  $\begin{array}{r} 92 \\ - 78 \\ \hline \end{array}$

18.  $\begin{array}{r} 37 \\ - 29 \\ \hline \end{array}$

Name \_\_\_\_\_

### **Mental Math: Using Compatible Numbers and Compensation** (continued)

Use mental math to find each sum or difference.

**19.**  $17 + 23 + 40$

**20.**  $46 + 18 + 14$

**21.**  $27 + 28 + 32$

**22.** 
$$\begin{array}{r} 31 \\ + 53 \\ \hline \end{array}$$

**23.** 
$$\begin{array}{r} 74 \\ + 18 \\ \hline \end{array}$$

**24.** 
$$\begin{array}{r} 44 \\ + 37 \\ \hline \end{array}$$

**25.** 
$$\begin{array}{r} 36 \\ - 17 \\ \hline \end{array}$$

**26.** 
$$\begin{array}{r} 83 \\ - 65 \\ \hline \end{array}$$

**27.** 
$$\begin{array}{r} 76 \\ - 29 \\ \hline \end{array}$$

- 28.** Kara read 23 books in September, 17 in October, and 31 in November. Use mental math to find how many books she read in all.

\_\_\_\_\_

- 29. Algebra**  $41 + x + 19 = 83$ . What does  $x$  equal?

\_\_\_\_\_

- 30.** Brad and Joe want to buy a new video game for \$59. Brad has \$26 and Joe has \$14. How much more money do they need?

\_\_\_\_\_

- 31.** Billy earned \$42 in week 1, \$23 in week 2, \$28 in week 3, and \$38 in week 4. How much did he earn in the first three weeks?

\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

- 32.** Chris has 23 compact disks, Bradley has 19, and Stephanie has 31. How many compact disks do they have in all?

**A** 50

**B** 82

**C** 73

**D** 70

**E** NH

- 33.**  $91 - 36 =$

**F** 45

**G** 55

**H** 47

**J** 90

**K** NH

Name \_\_\_\_\_

## Adding and Subtracting Greater Whole Numbers

---

### Example 1

Find  $15,608 + 12,573$ .

$$\begin{array}{r} 1 \quad 1 \\ 15,608 \\ + 12,573 \\ \hline 28,181 \end{array}$$

**Step 1** Add the ones. Regroup if you can.

**Step 2** Add the tens. Regroup if you can.

**Step 3** Add the hundreds. Regroup if you can.

**Step 4** Continue to add.

### Example 2

Find  $3,810 - 1,907$ .

$$\begin{array}{r} 218010 \\ \cancel{3},\cancel{8},\cancel{1}\cancel{0} \\ - 1,907 \\ \hline 1,903 \end{array}$$

**Step 1** Subtract the ones. Decide if you need to regroup.

**Step 2** Subtract the tens. Decide if you need to regroup.

**Step 3** Subtract the hundreds. Decide if you need to regroup.

**Step 4** Subtract the thousands.

**1.** 
$$\begin{array}{r} 53,648 \\ + 8,052 \\ \hline \end{array}$$

**2.** 
$$\begin{array}{r} 1,693 \\ + 18,024 \\ \hline \end{array}$$

**3.** 
$$\begin{array}{r} 37,960 \\ - 15,838 \\ \hline \end{array}$$

**4.** 
$$\begin{array}{r} 76,612 \\ + 8,908 \\ \hline \end{array}$$

**5.** 
$$\begin{array}{r} 377 \\ + 4,804 \\ \hline \end{array}$$

**6.** 
$$\begin{array}{r} 6,980 \\ - 972 \\ \hline \end{array}$$

**7.**  $4,338 + 1,615 + 307$   
\_\_\_\_\_

**8.**  $17,612 - 8,032$   
\_\_\_\_\_

Name \_\_\_\_\_

## Adding and Subtracting Greater Whole Numbers (continued)

9.  $\begin{array}{r} \$64,319 \\ + 3,680 \\ \hline \end{array}$

10.  $\begin{array}{r} 3,946 \\ + 1,073 \\ \hline \end{array}$

11.  $\begin{array}{r} 6,261 \\ - 1,334 \\ \hline \end{array}$

12.  $\begin{array}{r} \$4,364 \\ - 1,805 \\ \hline \end{array}$

13.  $\begin{array}{r} 683 \\ 1,270 \\ + 3,308 \\ \hline \end{array}$

14.  $\begin{array}{r} 38,042 \\ - 8,532 \\ \hline \end{array}$

15.  $\begin{array}{r} 15,410 \\ - 6,553 \\ \hline \end{array}$

16.  $\begin{array}{r} \$6,384 \\ + 4,628 \\ \hline \end{array}$

17.  $581 + 379 + 656$

18.  $73,450 - 5,117$

19.  $19,562 - 8,743$

Use the table at the right for Exercises 20–23.

Annual Wages	
Maria	\$47,387
Jeremy	\$28,405
Max	\$36,975
Julie	\$27,832
Chan	\$15,083
Nicole	\$41,670

20. Max and Nicole are married. What are their total annual wages? \_\_\_\_\_

21. **Algebra** Maria wants to make \$50,000. How much of a raise does she need to make \$50,000?  
 $\$47,387 + n = \$50,000$  Solve for  $n$ .  
 \_\_\_\_\_

22. **Mental Math** Julie is getting a \$3,000 raise in her annual wages. What will be her annual wages? Will she make more than her husband, Jeremy? \_\_\_\_\_

23. Chan works part time. Next year he will begin working full time and get his wages doubled. What will be his new annual wages? \_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

24.  $396 + 4,114 + 5,876$

A 10,376

B 10,386

C 10,286

D 9,990

E NH

25. Find the value of  $x + y$  if  $x = \$5,614$  and  $y = \$9,018$ .

F \$4,632

G \$14,622

H \$15,632

J \$14,632

K NH

Name \_\_\_\_\_

## Multiplying by One-Digit and Two-Digit Numbers

---

### Example

Find  $37 \times 13$ .

#### Step 1

Multiply by the ones.  
Regroup as needed.

$$\begin{array}{r} 2 \\ 37 \\ \times 13 \\ \hline 111 \end{array}$$

#### Step 2

Place a zero in the ones place.  
Multiply by the tens.  
Regroup as needed.

$$\begin{array}{r} 2 \\ 37 \\ \times 13 \\ \hline 111 \\ 370 \\ \hline \end{array}$$

#### Step 3

Add the products.

$$\begin{array}{r} 2 \\ 37 \\ \times 13 \\ \hline 111 \\ 370 \\ \hline 481 \end{array}$$

So,  $37 \times 13 = 481$ .

---

**1.** 
$$\begin{array}{r} 27 \\ \times 5 \\ \hline \end{array}$$

**2.** 
$$\begin{array}{r} 25 \\ \times 3 \\ \hline \end{array}$$

**3.** 
$$\begin{array}{r} 21 \\ \times 17 \\ \hline \end{array}$$

**4.** 
$$\begin{array}{r} 34 \\ \times 24 \\ \hline \end{array}$$

**5.** 
$$\begin{array}{r} 437 \\ \times 3 \\ \hline \end{array}$$

**6.** 
$$\begin{array}{r} 181 \\ \times 46 \\ \hline \end{array}$$

**7.** 
$$\begin{array}{r} 262 \\ \times 44 \\ \hline \end{array}$$

**8.** 
$$\begin{array}{r} 832 \\ \times 65 \\ \hline \end{array}$$

**9.** 
$$\begin{array}{r} 2,361 \\ \times 3 \\ \hline \end{array}$$

**10.** 
$$\begin{array}{r} 1,284 \\ \times 12 \\ \hline \end{array}$$

**11.** 
$$\begin{array}{r} 372 \\ \times 77 \\ \hline \end{array}$$

**12.** 
$$\begin{array}{r} 1,184 \\ \times 34 \\ \hline \end{array}$$

Name \_\_\_\_\_

**Multiplying by One-Digit and Two-Digit Numbers** (continued)

**13.** 
$$\begin{array}{r} 17 \\ \times 7 \\ \hline \end{array}$$

**14.** 
$$\begin{array}{r} 21 \\ \times 4 \\ \hline \end{array}$$

**15.** 
$$\begin{array}{r} 32 \\ \times 22 \\ \hline \end{array}$$

**16.** 
$$\begin{array}{r} \$0.51 \\ \times 23 \\ \hline \end{array}$$

**17.** 
$$\begin{array}{r} 427 \\ \times 5 \\ \hline \end{array}$$

**18.** 
$$\begin{array}{r} \$8.62 \\ \times 43 \\ \hline \end{array}$$

**19.** 
$$\begin{array}{r} 247 \\ \times 63 \\ \hline \end{array}$$

**20.** 
$$\begin{array}{r} 1,157 \\ \times 8 \\ \hline \end{array}$$

**21.** 
$$\begin{array}{r} \$5.54 \\ \times 76 \\ \hline \end{array}$$

**22.** 
$$\begin{array}{r} \$13.48 \\ \times 63 \\ \hline \end{array}$$

**23.** 
$$\begin{array}{r} 2,173 \\ \times 54 \\ \hline \end{array}$$

**24.** 
$$\begin{array}{r} 651 \\ \times 25 \\ \hline \end{array}$$

**25.**  $24 \times 72 =$   
\_\_\_\_\_

**26.**  $38 \times 9 =$   
\_\_\_\_\_

**27.**  $\$0.87 \times 134 =$   
\_\_\_\_\_

**28. Algebra** Find the value of  $716 \times n$  when  $n = 14$ . \_\_\_\_\_

**29.** Jason's dad's car can go 31 miles on each gallon of gasoline. When the tank is full, the car holds 27 gallons of gasoline. If the car is going 55 miles per hour, how far can it go on one full tank of gasoline? \_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**30.** Find  $63 \times 42$ .

**A** 756

**B** 2,646

**C** 378

**D** 2,546

**31.** A student membership to a museum costs \$12.31. How much will it cost for Mr. Clark's class of 24 to get memberships?

**F** \$295.44

**G** \$285.44

**H** \$73.86

**J** \$12.55

Name \_\_\_\_\_

## Multiplying Greater Numbers

---

### Example

Find  $437 \times 413$ .

#### Step 1

Multiply by the ones.

$$\begin{array}{r} 437 \\ \times 413 \\ \hline 1,311 \end{array}$$

#### Step 2

Place a zero in the ones place.

Multiply by the tens.

$$\begin{array}{r} 437 \\ \times 413 \\ \hline 1,311 \\ 4,370 \end{array}$$

#### Step 3

Place a zero in the ones and tens place.

Multiply by the hundreds.

$$\begin{array}{r} 437 \\ \times 413 \\ \hline 1,311 \\ 4,370 \\ 174,800 \end{array}$$

#### Step 4

Add the products.

$$\begin{array}{r} 437 \\ \times 413 \\ \hline 1,311 \\ 4,370 \\ + 174,800 \\ \hline 180,481 \end{array}$$

So,  $437 \times 413 = 180,481$ .

---

1. 
$$\begin{array}{r} 227 \\ \times 115 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 425 \\ \times 213 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 721 \\ \times 428 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 534 \\ \times 124 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 737 \\ \times 35 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 34 \\ \times 76 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 762 \\ \times 41 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 932 \\ \times 665 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 561 \\ \times 353 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 384 \\ \times 32 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 172 \\ \times 577 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 284 \\ \times 34 \\ \hline \end{array}$$

Name \_\_\_\_\_

### Multiplying Greater Numbers (continued)

**13.** 
$$\begin{array}{r} 517 \\ \times 17 \\ \hline \end{array}$$

**14.** 
$$\begin{array}{r} 721 \\ \times 214 \\ \hline \end{array}$$

**15.** 
$$\begin{array}{r} 326 \\ \times 622 \\ \hline \end{array}$$

**16.** 
$$\begin{array}{r} \$4.51 \\ \times 23 \\ \hline \end{array}$$

**17.** 
$$\begin{array}{r} 2,617 \\ \times 435 \\ \hline \end{array}$$

**18.** 
$$\begin{array}{r} \$9.62 \\ \times 243 \\ \hline \end{array}$$

**19.** 
$$\begin{array}{r} 2,417 \\ \times 63 \\ \hline \end{array}$$

**20.** 
$$\begin{array}{r} 574 \\ \times 338 \\ \hline \end{array}$$

**21.** 
$$\begin{array}{r} \$6.54 \\ \times 76 \\ \hline \end{array}$$

**22.** 
$$\begin{array}{r} \$32.48 \\ \times 263 \\ \hline \end{array}$$

**23.** 
$$\begin{array}{r} 723 \\ \times 154 \\ \hline \end{array}$$

**24.** 
$$\begin{array}{r} 9,751 \\ \times 825 \\ \hline \end{array}$$

**25.**  $24 \times 7,122 =$

**26.**  $383 \times 391 =$

**27.**  $\$91.87 \times 734 =$

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- 28. Mental Math** Explain how you can use mental math to find the product of 762 and 101.

\_\_\_\_\_  
\_\_\_\_\_

- 29.** The school cafeteria prepares breakfast for 315 students each morning. In purchasing food for the week, they will need 2 apples and 35 ounces of juice for each student. How much juice will they need for the week?

\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

- 30.** Find  $163 \times 742$ .

**A** 7,530      **B** 74,200      **C** 120,946      **D** 541,660

- 31.** Susan reads 137 books for the summer reading program at the library. Each book has at least 35 pages in it. What is the least number of pages that Susan read?

**F** 172 pgs.      **G** 1,096 pgs.      **H** 4,465 pgs.      **J** 4,795 pgs.

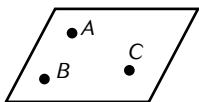


Name \_\_\_\_\_

## Geometric Ideas

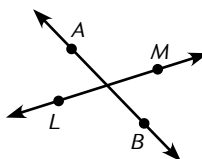
### Example 1

Draw and label an example of a plane  $ABC$ .



### Example 2

Draw and label an example of  $\overleftrightarrow{AB}$  intersects  $\overleftrightarrow{LM}$ .



Draw and label an example of each.

1. ray  $GH$

2. line segment  $RS$

3. plane  $IJK$

4.  $\overleftrightarrow{TV}$  is parallel to  $\overleftrightarrow{WX}$

5.  $\overleftrightarrow{EF}$  is perpendicular to  $\overleftrightarrow{JK}$

6.  $\overleftrightarrow{YZ}$  intersects  $\overleftrightarrow{AB}$

7.  $\overleftrightarrow{CD}$  intersects  $\overleftrightarrow{HJ}$

8.  $\overleftrightarrow{LM}$  is perpendicular to  $\overleftrightarrow{NP}$

9. point  $C$

Name \_\_\_\_\_

### Geometric Ideas (continued)

Draw and label an example of each.

- 10.** two perpendicular lines      **11.** two parallel lines      **12.** plane  $JKL$

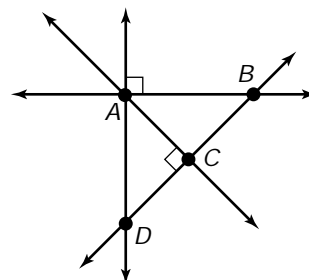
- 13.** ray  $HJ$       **14.** line segment  $KL$       **15.** line  $RS$

Use the drawing at the right for Exercises 16 and 17.

- 16.** Name 3 line segments      **17.** Name 2 lines

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_



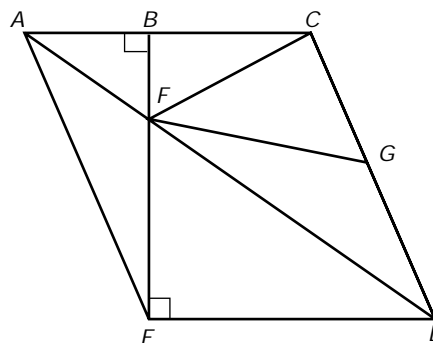
- 18. Math Reasoning** What geometric idea is suggested by a floor in a room? What geometric idea is suggested by the edge of a table?

\_\_\_\_\_

**Test Prep** Choose the correct letter for the answer.

- 19.** Which of these describes point  $F$ ?

- A** It is the endpoint of  $\overline{AD}$ .
- B** It is the endpoint of  $\overline{FG}$ .
- C** It is on  $\overline{AC}$ .
- D** It is on  $\overline{AG}$ .



Name \_\_\_\_\_

## Multiplication Properties

---

### Example 1

One strategy that can be used is the break-apart strategy.

Find  $4 \times 17$ .

$$\begin{aligned} 4 \times 17 &= 4 \times (10 + 7) \\ &= (4 \times 10) + (4 \times 7) \\ &= 40 + 28 \\ &= 68 \end{aligned}$$

### Example 2

Compatible numbers is another strategy.

Find  $2 \times (287 \times 5)$ .

$$\begin{aligned} 2 \times (287 \times 5) &= 2 \times (5 \times 287) \\ &= (2 \times 5) \times 287 \\ &= 10 \times 287 \\ &= 2870 \end{aligned}$$

### Example 3

The compensation strategy can also be used.

Find  $3 \times 398$ .

$$\begin{aligned} 3 \times 398 &= 3 \times (400 - 2) \\ &= (3 \times 400) - (3 \times 2) \\ &= 1200 - 6 \\ &= 1194 \end{aligned}$$

---

Use multiplication properties and mental math to simplify each expression.

**1.**  $4 \times (18 \times 25)$

\_\_\_\_\_

**2.**  $7 \times 98$

\_\_\_\_\_

**3.**  $5 \times 402$

\_\_\_\_\_

**4.**  $3 \times 152$

\_\_\_\_\_

**5.**  $11 \times 19$

\_\_\_\_\_

**6.**  $5 \times (871 \times 2)$

\_\_\_\_\_

**7.**  $29 \times 15$

\_\_\_\_\_

**8.**  $4 \times 94$

\_\_\_\_\_

**9.**  $20 \times (91 \times 5)$

\_\_\_\_\_

**10.**  $6 \times 43$

\_\_\_\_\_

**11.**  $19 \times 99$

\_\_\_\_\_

**12.**  $2 \times (87 \times 5)$

\_\_\_\_\_

Name \_\_\_\_\_

### Multiplication Properties (continued)

Use multiplication properties and mental math to simplify each expression.

**13.**  $5 \times 89$

\_\_\_\_\_

**14.**  $5 \times (83 \times 2)$

\_\_\_\_\_

**15.**  $3 \times 298$

\_\_\_\_\_

**16.**  $12 \times 1 \times 12$

\_\_\_\_\_

**17.**  $3 \times 208$

\_\_\_\_\_

**18.**  $35 \times 128 \times 0$

\_\_\_\_\_

**19.**  $2 \times (101 \times 5)$

\_\_\_\_\_

**20.**  $3 \times 58$

\_\_\_\_\_

Find the missing value. Name the property that you used.

**21.**  $3 \times (14 + n) = (3 \times 14) + (3 \times 27)$

\_\_\_\_\_

**22.**  $70 \times (4 \times 21) = (70 \times n) \times 21$

\_\_\_\_\_

**23.**  $904 \times n = 904$

\_\_\_\_\_

**24. Math Reasoning** Suppose that  $28 \times (13 \times 0) = (28 \times n) \times 0$ . Then what is the value of  $n$ ? Is it unique? Explain.

\_\_\_\_\_

**Test Prep** Choose the correct letter for each answer.

**25.** Find the missing value.  $(4 + n) \times 7 = (4 \times 7) + (2 \times 7)$

**A** 4

**B** 2

**C** 7

**D** 14

**26.** A bookcase has 4 shelves. Each shelf has 5 hard-cover books and 3 paperback books. Which expression is equal to the total number of books in the bookcase?

**F**  $4 \times (5 + 3)$

**H**  $3 \times 5 + 4$

**G**  $4 \times (5 \times 3)$

**J**  $3 \times (4 + 5)$

Name \_\_\_\_\_

## Relating Addition and Subtraction

1.

$$\boxed{12 - 5}$$

- ☐  $2 + 5 = 7$
- ☐  $5 + 5 = 10$
- ☐  $5 + 6 = 11$
- ☐  $5 + 7 = 12$

2.

$$\begin{array}{r} 8 \\ + 6 \\ \hline 14 \end{array} \quad \begin{array}{r} 14 \\ - 8 \\ \hline ? \end{array}$$

- ☐ 6
- ☐ 7
- ☐ 8
- ☐ NH

3.

$$\boxed{14 - 7}$$

- ☐  $6 + 6 = 12$
- ☐  $7 + 7 = 14$
- ☐  $8 + 8 = 16$
- ☐  $9 + 9 = 18$

4.

$$\begin{array}{r} 13 \\ - 7 \\ \hline ? \end{array} \quad \begin{array}{r} 7 \\ + ? \\ \hline 13 \end{array}$$

- ☐ 8
- ☐ 7
- ☐ 6
- ☐ NH

5.

$$\begin{array}{r} 5 \\ + 6 \\ \hline 11 \end{array} \quad \begin{array}{r} 11 \\ - 6 \\ \hline ? \end{array}$$

- ☐ 7
- ☐ 6
- ☐ 5
- ☐ NH

6.

$$\begin{array}{r} 17 \\ - 8 \\ \hline ? \end{array} \quad \begin{array}{r} 8 \\ + ? \\ \hline 17 \end{array}$$

- ☐ 9
- ☐ 8
- ☐ 7
- ☐ NH

**Oral Directions** Fill in the ☐ for the correct answer. If the correct answer is not given, mark NH for "Not Here."

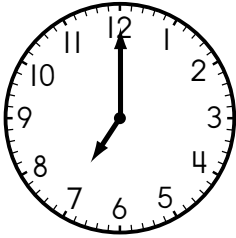
#1. Which addition fact can help you solve  $12 - 5$ ?

#2. Use the addition fact to find the difference.  
#3. Which addition fact can help you solve  $14 - 7$ ?  
#4. Find the missing number.  
#5. Use the addition fact to find the difference.  
#6. Find the missing number.

Name \_\_\_\_\_

## Hour and Minute Hands

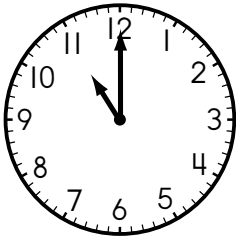
1.



☐ 12 o'clock      ☐ 6 o'clock

☐ 7 o'clock      ☐ 5 o'clock

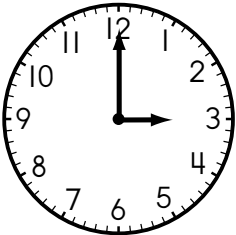
2.



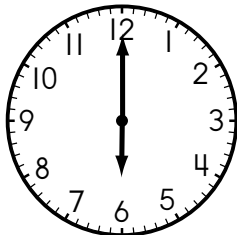
☐ 10 o'clock      ☐ 11 o'clock

☐ 12 o'clock      ☐ 1 o'clock

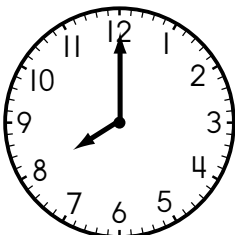
3.



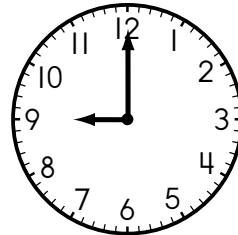
☐



☐

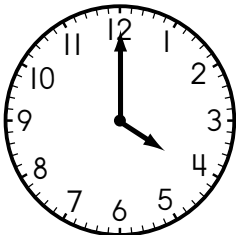


☐

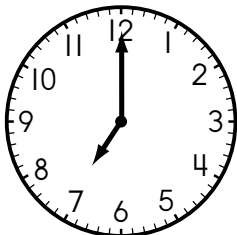


☐

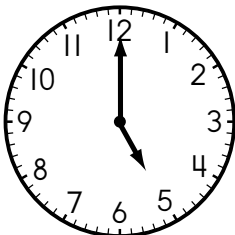
4.



☐



☐



☐

**Oral Directions** Fill in the ☐ for the correct answer.

#3. Which clock shows the hour hand pointing to 8?  
#4. Which clock shows the hour hand pointing to 4?

#1–2. What time does the clock show?

Name \_\_\_\_\_

## Estimating to Check Results

1.  $20 + 30 = 50$        $40 - 20 = 20$        $20 + 40 = 60$       NH  
☐                      ☐                      ☐                      ☐

---

2.  $80 + 10 = 90$        $80 - 40 = 40$        $40 - 20 = 20$       NH  
☐                      ☐                      ☐                      ☐

---

3.  $50 + 30 = 80$        $50 - 30 = 20$        $50 - 20 = 30$       NH  
☐                      ☐                      ☐                      ☐

---

4.  $40 - 30 = 10$        $50 + 30 = 80$        $50 + 40 = 90$       NH  
☐                      ☐                      ☐                      ☐

---

**Oral Directions** Fill in the ☐ for the correct answer. If the correct answer is not given, mark NH for "Not Here."

#1. Paul bought 22 stickers. Susan bought 39 stickers. Which number sentence would you use to estimate the number of stickers they bought in all?

#2. Val scored 78 points on a computer game. Pete scored 37 points. What number sentence would you use to estimate how many more points Val scored than Pete?

#3. Tony had 53¢. He bought a book for 29¢. Which number sentence would you use to estimate how much money Tony had left over?

#4. Harry had 48¢. Josh gave him 37¢ more. Which number sentence would you use to estimate how much money Harry now has?

Name \_\_\_\_\_

## Adding Two-Digit Numbers

1.

Tens	Ones
2	5
+3	3

58    55    61    NH

☐    ☐    ☐    ☐

2.

Tens	Ones
2	8
+1	4

24    42    34    NH

☐    ☐    ☐    ☐

3.

Tens	Ones
2	6
+1	7

39    43    47    NH

☐    ☐    ☐    ☐

4.

Tens	Ones
5	3
+2	8

81    79    77    NH

☐    ☐    ☐    ☐

5.

Tens	Ones
1	8
+1	5

34    29    33    NH

☐    ☐    ☐    ☐

6.

Tens	Ones
3	5
+3	7

72    70    77    NH

☐    ☐    ☐    ☐

**Oral Directions** Fill in the ☐ for the correct answer. If the correct answer is not given, mark NH for "Not Here."

#1–6. Add. Regroup if necessary.



Name \_\_\_\_\_

## Pennies, Nickels, and Dimes

1.



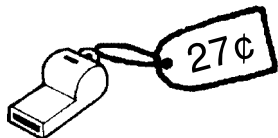
☐ 22¢

☐ 27¢

☐ 37¢

☐ 42¢

2.



**Oral Directions** Fill in the ☐ for the correct answer.

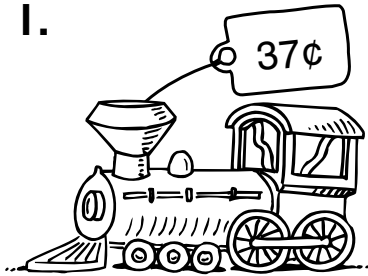
#2. Which group of coins shows enough money to buy the whistle?

#1. Elmore is counting his money. How much does he have?

Name \_\_\_\_\_

# Ways to Show Amounts

1.



☐



☐



☐



☐



2.

☐



☐



☐



☐



**Oral Directions** Fill in the ☐ for the correct answer.

#2. Which shows the fewest number of coins you need to make 76¢?

#1. Which shows the fewest number of coins you need to buy the toy?

Name \_\_\_\_\_

# Dollars

1.



- ☐ 4
- ☐ 10
- ☐ 20
- ☐ 100

2.

4

10

20

100

☐

☐

☐

☐

3.

☐



☐



☐



☐



**Oral Directions** Fill in the ☐ for the correct answer.

- #2. Which shows the number of dimes in one dollar?  
 #3. Which group of coins is worth exactly \$1.00?

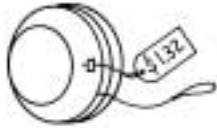
#1. Which shows the number of nickels in one dollar?

Name \_\_\_\_\_

## Use Dollars and Cents



sticker



yo-yo



plane



paddle-ball

1.



\$1.32



\$3.50



\$3.80



\$3.82



2. \$3.30



\$3.43



\$3.73



\$4.30



3. \$2.73



\$2.75



\$2.83



\$2.85



**Oral Directions** Fill in the ☐ for the correct answer.

#1. Austin wants to buy a yo-yo and a plane. How much money does he need?

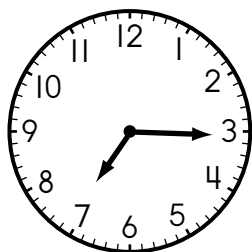
#2. Rachel wants to buy a roll of stickers and a paddle ball. How much money does she need?

#3. Manuella wants to buy a yo-yo and a roll of stickers. How much money does she need?

Name \_\_\_\_\_

## Time to the Quarter Hour

1.

☐

7:45

☐

7:15

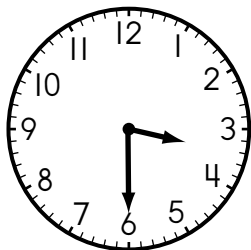
☐

8:15

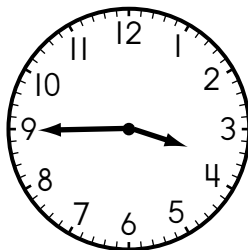
☐

3:00

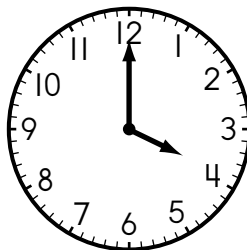
2.



4:00

☐

4:15

☐

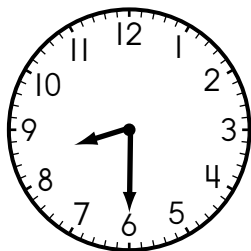
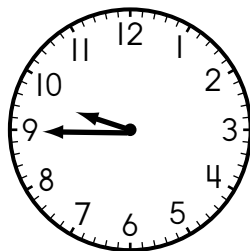
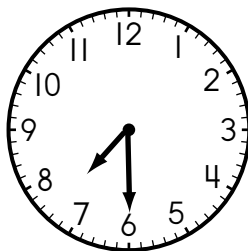
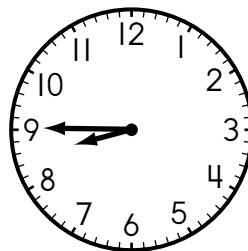
3:30

☐

4:30

☐

3.

☐☐☐☐

**Oral Directions** Fill in the ☐ for the correct answer.

#3. What clock shows 8:45?

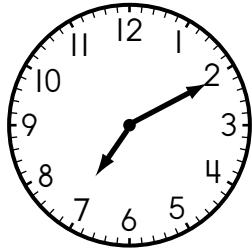
#1. What time is shown?

#2. Look at the pattern. What time comes next?

Name \_\_\_\_\_

## Time to Five Minutes

1.

☐

7:10

☐

7:20

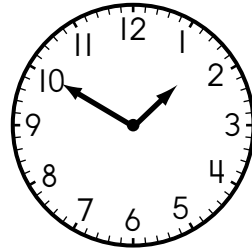
☐

8:10

☐

2:35

2.

☐

2:10

☐

10:20

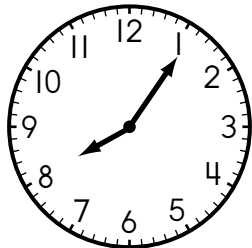
☐

1:50

☐

1:40

3.

☐

8:50

☐

8:05

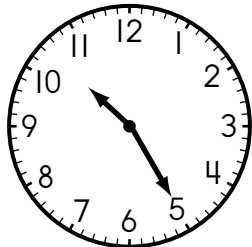
☐

8:10

☐

7:10

4.

☐

11:25

☐

10:30

☐

11:05

☐

10:25

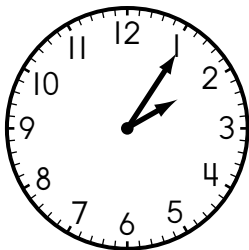
**Oral Directions** Fill in the ☐ for the correct answer.

#1–4. What time is shown?

Name \_\_\_\_\_

## Telling Time

1.

☐

2:10

☐

3:05

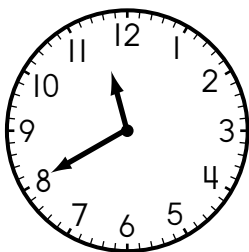
☐

2:05

☐

2:00

2.

☐

11:40

☐

12:10

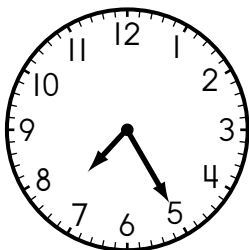
☐

11:35

☐

10:40

3.

☐

6:35

☐

8:20

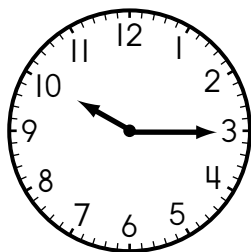
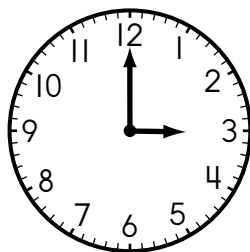
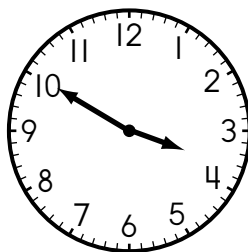
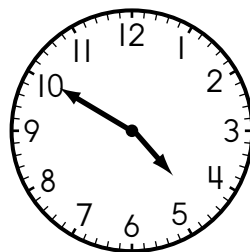
☐

8:25

☐

7:25

4.

☐☐☐☐

**Oral Directions** Fill in the ☐ for the correct answer.

#1–3. What time is shown?

#4. Which clock shows 3:50?

Name \_\_\_\_\_

## A.M. and P.M.

1.      3:00 P.M.      2:00 P.M.      4:00 A.M.      3:00 A.M.
- ○                   ○                   ○

- 
2.      1 hour      3 hours      4 hours      6 hours
- ○                   ○                   ○

- 
3.      11:00 A.M.      1:00 P.M.      3:00 P.M.      10:00 A.M.
- ○                   ○                   ○

- 
4.      7 hours      8 hours      9 hours      3 hours
- ○                   ○                   ○

**Oral Directions** Fill in the ○ for the correct answer.

#1. Sue left home at 10:00 a.m. She returned 4 hours later. What time did she return?

#2. The concert started at 11:00 a.m. and finished at 5:00 p.m. How long did the concert last?

#3. Ben's baseball practice ended at 2:00 p.m. The practice lasted 3 hours. At what time did it start?

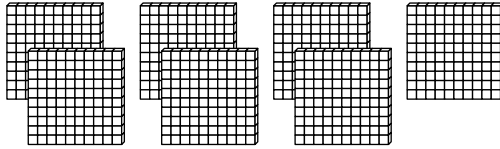
#4. Jackie went to sleep at 9:00 p.m. and woke up at 6:00 a.m. For how long did she sleep?



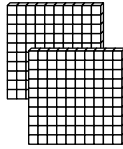
Name \_\_\_\_\_

# One Thousand

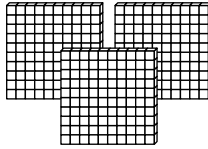
1.



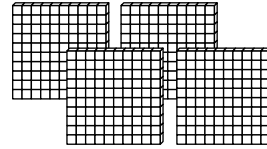
☐



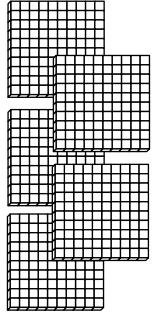
☐



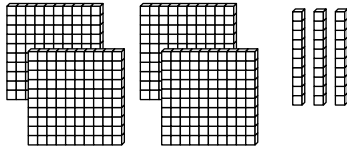
☐



☐



2.



560

☐

570

☐

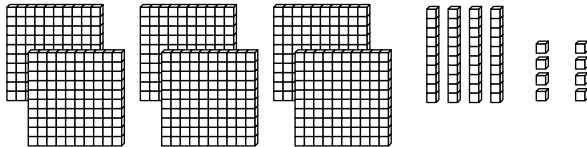
660

☐

670

☐

3.



352

☐

362

☐

452

☐

462

☐

4. 590 and \_\_\_\_\_ are 1,000.

510

☐

500

☐

410

☐

400

☐

**Oral Directions** Fill in the ☐ for the correct answer.

#1. Which shows how many more you need to make 1,000?

#2. Which numeral tells how much more you need to make 1,000?

#3. Which numeral tells how much more you need to make 1,000?

#4. Which numeral tells how much more you need to make 1,000?

Name \_\_\_\_\_

## Comparing Numbers to 1,000

1. \_\_\_\_\_ < 463

443

☐

463

☐

489

☐

493

☐

---

2. \_\_\_\_\_ > 729

709

☐

719

☐

729

☐

759

☐

---

3. \_\_\_\_\_ > 199

201

☐

199

☐

198

☐

109

☐

---

4. 400 books

☐

408 books

☐

415 books

☐

420 books

☐

---

5. 319

☐

391

☐

401

☐

410

☐

---

**Oral Directions** Fill in the ☐ for the correct answer.

#1. Find the number that is less than 463.

#2. Find the number that is greater than 729.

#3. Find the number that is greater than 199.

#4. The library has 418 books about plants. It has more books about animals. Which could be the number of books about animals?

#5. Dara is thinking of a number. It is greater than 390. It is less than 411. It has a 1 in the tens place. What is the number?

Name \_\_\_\_\_

## Three-Digit Addition

1.

	H	T	O
	3	2	8
+	1	2	5

444   453   451   NH

☐   ☐   ☐   ☐

2.

	H	T	O
	4	1	2
+	2	5	9

671   668   664   NH

☐   ☐   ☐   ☐

3.

	H	T	O
	2	7	4
+	1	6	2

432   436   448   NH

☐   ☐   ☐   ☐

4.

	H	T	O
	3	1	6
+	1	1	9

435   430   440   NH

☐   ☐   ☐   ☐

5.

	H	T	O
	6	2	4
+	2	1	7

833   837   841   NH

☐   ☐   ☐   ☐

6.

	H	T	O
	2	7	6
+	2	1	5

487   491   493   NH

☐   ☐   ☐   ☐

**Oral Directions** Fill in the ☐ for the correct answer. If the correct answer is not given, mark NH for "Not Here."

#1–6. Add.

Name \_\_\_\_\_

## Subtracting With Zeros

1.

	H	T	O
	3	4	0
-	1	1	8

226   218   222   NH

☐   ☐   ☐   ☐

2.

	H	T	O
	5	2	0
-	2	1	8

298   302   306   NH

☐   ☐   ☐   ☐

3.

	H	T	O
	4	0	5
-	1	2	3

286   282   288   NH

☐   ☐   ☐   ☐

4.

	H	T	O
	5	0	4
-	2	2	2

264   288   282   NH

☐   ☐   ☐   ☐

5.

	H	T	O
	4	1	0
-	2	1	0

158   200   228   NH

☐   ☐   ☐   ☐

6.

	H	T	O
	2	6	0
-	2	1	2

248   244   252   NH

☐   ☐   ☐   ☐

**Oral Directions** Fill in the ☐ for the correct answer. If the correct answer is not given, mark NH for "Not Here."

#1–6. Subtract.

Name \_\_\_\_\_

## Adding and Subtracting Money

1. 
$$\begin{array}{r} \$3.19 \\ + \$2.27 \\ \hline \end{array}$$

\$5.43   \$5.46   \$5.52   NH  
☐   ☐   ☐   ☐

2. 
$$\begin{array}{r} \$1.05 \\ + \$3.49 \\ \hline \end{array}$$

\$4.64   \$4.56   \$4.54   NH  
☐   ☐   ☐   ☐

3. 
$$\begin{array}{r} \$4.75 \\ - \$2.44 \\ \hline \end{array}$$

\$2.37   \$2.29   \$2.31   NH  
☐   ☐   ☐   ☐

4. 
$$\begin{array}{r} \$5.29 \\ - \$4.18 \\ \hline \end{array}$$

\$1.09   \$1.11   \$1.17   NH  
☐   ☐   ☐   ☐

5. 
$$\begin{array}{r} \$3.82 \\ + \$4.16 \\ \hline \end{array}$$

\$7.98   \$7.92   \$7.88   NH  
☐   ☐   ☐   ☐

6. 
$$\begin{array}{r} \$6.35 \\ - \$4.29 \\ \hline \end{array}$$

\$2.06   \$2.04   \$2.10   NH  
☐   ☐   ☐   ☐

**Oral Directions** Fill in the ☐ for the correct answer. If the correct answer is not given, mark NH for "Not Here."

#1–6. Add or subtract.

Name \_\_\_\_\_

## Reading and Writing Four-Digit Numbers

Choose the correct letter for each answer.

1. What is the value of the 8 in 8,629?

**A** Eight  
**B** Eighty  
**C** Eight hundred  
**D** Eight thousand

2. Mary Johnson has two thousand, three hundred, seventy-four stamps in her collection. Which shows this number?

**F** 23,740      **H** 2,734  
**G** 23,074      **J** 2,374

3. Which is the number in standard form?

$$6,000 + 900 + 7$$

**A** 6,907  
**B** 69,700  
**C** 6,000,907  
**D** 6,900,700

4. Great White Sharks can weigh up to 7,040 pounds. How is 7,040 written in word form?

**F** Seventy-four  
**G** Seven hundred four  
**H** Seven thousand, four  
**J** Seven thousand, forty  
**K** NH

5. On July 4th weekend, the zoo had 9,184 visitors. What words mean 9,184?

**A** Ninety one thousand, eighty-four  
**B** Nine thousand, one hundred, eighty-four  
**C** Nine thousand, eighty-four  
**D** Nine thousand, eighteen four

6. Bay City has a population of 8,542. What is the value of the 5 in 8,542?

**F** Five      **H** Five hundred  
**G** Fifty      **J** Five thousand

7. Which is the expanded form for the number 3,082?

**A**  $3,000 + 800 + 2$   
**B**  $3,000 + 800 + 20$   
**C**  $3,000 + 80 + 2$   
**D**  $300 + 80 + 2$

8. Which is a 4-digit number with a 6 in the hundreds place and a 3 in the tens place?

**F** 630      **H** 6,533  
**G** 6,630      **J** 4,603

Name \_\_\_\_\_

## Rounding to the Nearest Ten and Hundred

Choose the correct letter for each answer.

1. A television costs \$354. What is the cost rounded to the nearest ten?

**A** \$400                      **D** \$300  
**B** \$360                      **E** NH  
**C** \$350

2. A book has 261 pages. What is the number of pages rounded to the nearest hundred?

**F** 200 pages  
**G** 250 pages  
**H** 260 pages  
**J** 300 pages  
**K** NH

3. Naomi has a secret number. To the nearer hundred, it rounds to 300. To the nearer ten, it rounds to 350. Which of these could be Naomi's secret number?

**A** 359                      **D** 342  
**B** 351                      **E** NH  
**C** 346

4. Bill is on a trip with his family. So far, they have traveled 462 miles. What is the number of miles rounded to the nearest hundred?

**F** 400 miles              **J** 500 miles  
**G** 460 miles              **K** NH  
**H** 470 miles

5. Which of the following numbers, when rounded to the nearest hundred, does not round to 400?

**A** 351                      **D** 451  
**B** 398                      **E** NH  
**C** 439

- 6.

Television	Cost
12 inch	\$99
19 inch	\$197
21 inch	\$281
27 inch	\$329

Jason bought one of the television sets listed in the table. He spent about \$200. Which size television set did Jason buy?

**F** 12 inch                      **J** 27 inch  
**G** 19 inch                      **K** NH  
**H** 21 inch

7. Which is 442 rounded to the nearest ten?

**A** 500                      **D** 400  
**B** 440                      **E** NH  
**C** 420

Name \_\_\_\_\_

## Rounding Larger Numbers

Choose the correct letter for each answer.

1. Which is 7,093 rounded to the nearest hundred?

**A** 7,000                      **D** 7,190  
**B** 7,090                      **E** NH  
**C** 7,100

2. There are 4,363 tickets sold for a concert. Which shows the number of tickets sold rounded to the nearest thousand?

**F** 4,000                      **J** 5,000  
**G** 4,300                      **K** NH  
**H** 4,400

- 3.

Winter Carnival	
Activity	Number of People
Sledding	65
Skating	235
Snow Sculpture	1,365
Total Attendance	1,665

What was the total attendance at the Winter Carnival, rounded to the nearest hundred?

**A** 1,670                      **D** 3,300  
**B** 1,700                      **E** NH  
**C** 2,000

4. Which is 5,688 rounded to the nearest ten?

**F** 6,000                      **J** 5,600  
**G** 5,700                      **K** NH  
**H** 5,690

5. Bret is on a family trip with his family. So far, they have traveled 1,608 miles. What is the number of miles rounded to the nearest ten?

**A** 1,600                      **D** 2,000  
**B** 1,610                      **E** NH  
**C** 1,700

6. Which of the following numbers, when rounded to the nearest thousand, does not round to 8,000?

**F** 7,503                      **J** 8,599  
**G** 7,654                      **K** NH  
**H** 8,489

7. Amber has 2,115 shells in her collection. What is the number of shells rounded to the nearest hundred?

**A** 2,000                      **D** 2,120  
**B** 2,100                      **E** NH  
**C** 2,110



Name \_\_\_\_\_

## Comparing and Ordering Numbers

Choose the correct letter for each answer.

1. Compare 2,001 and 2,010. Choose the correct symbol.

**A** +                      **C** <  
**B** >                      **D** =

2. Marie compared the number of students in each grade at her school.

Emerson School	
Grade	Number of Students
First Grade	95
Second Grade	117
Third Grade	195
Fourth Grade	171

Which grade had the most students?

**F** Fourth Grade  
**G** Third Grade  
**H** Second Grade  
**J** First Grade

3. Which numbers are in order from least to greatest?

**A** 657, 675, 756  
**B** 657, 692, 628  
**C** 657, 635, 691  
**D** 657, 660, 658

4. Which of the following is true?

**F**  $4,374 > 4,647$   
**G**  $1,355 < 1,453$   
**H**  $569 = 589$   
**J**  $9,019 > 9,119$

5. Which lists the distances from least to greatest?

Distances from Jackson to Other Cities	
City	Number of Miles
Clark	270
Leed	237
Piney	230
Kane	273

**A** Kane, Clark, Leed, Piney  
**B** Piney, Leed, Clark, Kane  
**C** Clark, Kane, Leed, Piney  
**D** Piney, Leed, Kane, Clark

6. Which group of numbers is in order from greatest to least?

**F** 2,673; 2,583; 2,516; 2,561  
**G** 2,561; 2,516; 2,673; 2,583  
**H** 2,516; 2,561; 2,583; 2,673  
**J** 2,673; 2,583; 2,561; 2,516

Name \_\_\_\_\_

## Extending Place-Value Concepts

Choose the correct letter for each answer.

1. Which is the standard form for three hundred seventeen thousand, one hundred three?

**A** 370,130  
**B** 317,130  
**C** 317,103  
**D** 300,173

2. What is the value of the 2 in 258,364?

**F** 20  
**G** 200  
**H** 2,000  
**J** 200,000

3. Which is the value of the underlined digit in 237,097?

**A** 7  
**B** 70  
**C** 7,000  
**D** 70,000

4. Which is the number in standard form?

$$70,000 + 9,000 + 800$$

**F** 70,908  
**G** 79,800  
**H** 709,800  
**J** 700,009,800

5. What is the value of the 5 in the number 152,309?

**A** 5                      **C** 5 thousand  
**B** 50                    **D** 50 thousand

6. Which shows the correct way to write 493,805?

**F** Four thousand ninety-three, eight hundred five  
**G** Four hundred thousand ninety-three, eight hundred five  
**H** Four hundred ninety-three, eight hundred five  
**J** Four hundred ninety-three thousand, eight hundred five

7. Which is the expanded form for 68,002?

**A**  $600,000 + 8,000 + 20$   
**B**  $60,000 + 8,000 + 200$   
**C**  $60,000 + 8,000 + 2$   
**D**  $60,000 + 800 + 2$

8. Which number rounds to 50?

**F** 59                      **H** 44  
**G** 46                      **J** 38

Name \_\_\_\_\_

## Estimating Sums

Choose the correct letter for each answer.

1. Estimate  $28 + 53$ .

- |             |             |
|-------------|-------------|
| <b>A</b> 20 | <b>C</b> 70 |
| <b>B</b> 60 | <b>D</b> 80 |

2. Tanya's family will visit a national park that is 215 miles away. Then they will go to see Aunt Mel who lives 178 miles from the park. About how many miles will they travel in all?

- F** About 300 miles  
**G** About 400 miles  
**H** About 500 miles  
**J** About 600 miles

3. Eddie scored 467 points in a board game. His brother scored 339 points. About how many points did they score together?

- A** About 200 points  
**B** About 700 points  
**C** About 800 points  
**D** About 900 points

4. Estimate  $97 + 38$ .

- |              |              |
|--------------|--------------|
| <b>F</b> 140 | <b>H</b> 120 |
| <b>G</b> 130 | <b>J</b> 60  |

5. Last summer, 390 girls and 414 boys were in the summer soccer league. About how many children were in the summer soccer league?

- A** About 100 children  
**B** About 500 children  
**C** About 700 children  
**D** About 800 children

6. Estimate  $19 + 81$ .

- |              |              |
|--------------|--------------|
| <b>F</b> 90  | <b>H</b> 110 |
| <b>G</b> 100 | <b>J</b> 120 |

7. Alan picked apples on three different days. On Friday, he picked 201 apples. On Saturday, he picked 207 apples, and on Sunday, he picked 112. About how many apples did he pick all together?

- A** About 200 apples  
**B** About 400 apples  
**C** About 500 apples  
**D** About 700 apples

8. Estimate  $580 + 710$ .

- |                |                |
|----------------|----------------|
| <b>F</b> 1,000 | <b>H</b> 1,300 |
| <b>G</b> 1,100 | <b>J</b> 1,400 |

Name \_\_\_\_\_

## Subtracting Greater Numbers

Choose the correct letter for each answer.

1. A mile is 5,280 feet. Stefanie is walking in a one-mile race. She walks 2,670 feet. How many feet does she have left to walk?

**A** 7,950 feet    **D** 2,160 feet  
**B** 3,610 feet    **E** NH  
**C** 2,610 feet

2. Maya had \$45.75. She spent \$13.84 on a gift for her sister. How much money did she have left?

**F** \$30.91    **J** \$59.59  
**G** \$31.91    **K** NH  
**H** \$32.11

3. 
$$\begin{array}{r} 7,465 \\ - 3,991 \\ \hline \end{array}$$

**A** 4,534    **D** 3,474  
**B** 3,674    **E** NH  
**C** 3,534

4.  $5,764 - 951 =$

**F** 3,813    **J** 5,133  
**G** 4,113    **K** NH  
**H** 4,813

5. 
$$\begin{array}{r} 3,251 \\ - 2,550 \\ \hline \end{array}$$

**A** 1,701    **D** 601  
**B** 1,601    **E** NH  
**C** 701

6. A festival had 2,065 guests. By midnight, 1,436 guests had gone home. How many guests were still at the festival?

**F** 629 guests    **J** 3,501 guests  
**G** 631 guests    **K** NH  
**H** 1,431 guests

7. The Salvador family sold 2,532 eggs last month. This month they sold 2,892 eggs. How many more eggs did they sell this month than last month?

**A** 5,244 eggs    **D** 440 eggs  
**B** 5,154 eggs    **E** NH  
**C** 540 eggs

8. 
$$\begin{array}{r} \$32.13 \\ - 28.65 \\ \hline \end{array}$$

**F** \$3.48    **J** \$60.78  
**G** \$13.48    **K** NH  
**H** \$16.52

Name \_\_\_\_\_

## Mental Math Strategies

Choose the correct letter for each answer.

**1. Which of the following is a way to add 83 and 46 mentally?**

- A** Add 80 and 40, then add 3 and 6. Then subtract their sums.
- B** Add 80 and 40, then add 3 and 6. Then add the sums.
- C** Add 80 and 46, then add 13.
- D** Subtract 80 and 40, then add the sum of 3 and 6.

**2. Use breaking apart to find  $868 + 248$ .**

- |                |                |
|----------------|----------------|
| <b>F</b> 1,006 | <b>J</b> 1,116 |
| <b>G</b> 1,106 | <b>K</b> NH    |
| <b>H</b> 1,110 |                |

**3. Use compensation to find  $64 + 18$ .**

- |             |             |
|-------------|-------------|
| <b>A</b> 72 | <b>D</b> 92 |
| <b>B</b> 81 | <b>E</b> NH |
| <b>C</b> 82 |             |

**4. On Saturday, 352 tickets were sold. On Sunday, 483 tickets were sold. How many more tickets were sold on Sunday?**

- |                      |                      |
|----------------------|----------------------|
| <b>F</b> 121 tickets | <b>J</b> 133 tickets |
| <b>G</b> 128 tickets | <b>K</b> NH          |
| <b>H</b> 132 tickets |                      |

**5. Which of the following is a way to subtract  $75 - 28$  mentally?**

- A** Add 2 to 28 to make 30. Subtract 30 from 75. Add 2 to the difference.
- B** Add 5 to the 75 to make 80. Subtract 20 from 80, then add 8 to the difference.
- C** Subtract 20 from 70, then subtract 5 from 8. Then add the differences.
- D** Subtract 20 from 70, then subtract 5 from 8.

**6. On Friday, 378 adults and 498 children went to the zoo. How many people went to the zoo on Friday?**

- |                     |                     |
|---------------------|---------------------|
| <b>F</b> 120 people | <b>J</b> 976 people |
| <b>G</b> 876 people | <b>K</b> NH         |
| <b>H</b> 878 people |                     |

**7. Use compensation to find  $711 - 99$ .**

- |              |              |
|--------------|--------------|
| <b>A</b> 609 | <b>D</b> 612 |
| <b>B</b> 610 | <b>E</b> NH  |
| <b>C</b> 611 |              |

**8. Use breaking apart to find  $48 + 25$ .**

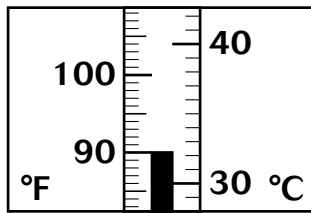
- |             |             |
|-------------|-------------|
| <b>F</b> 23 | <b>J</b> 83 |
| <b>G</b> 63 | <b>K</b> NH |
| <b>H</b> 73 |             |

Name \_\_\_\_\_

# Temperature

Choose the correct letter for each answer.

1. Which word best describes the temperature on this thermometer?



- A** Hot
- B** Cold
- C** Warm
- D** Cool

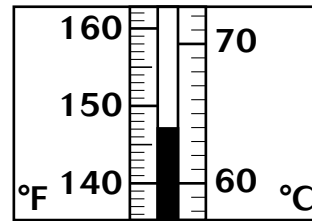
2. The temperature is 15°C. Which would you most likely wear?

- F** Hat, gloves, and heavy coat
- G** Sweater or sweatshirt
- H** Bathing suit
- J** Shorts and a tee shirt

3. At which temperature does water freeze?

- A** 212°F
- B** 20°C
- C** 37°C
- D** 32°F

4. What is the temperature in °C shown on this thermometer?



- F** 147°C
- H** 64°C
- G** 147°F
- J** 64°F

5. The temperature is 30°F in Denver, 77°F in Atlanta, 98°F in Mexico City, and 62°F in Trenton. In which city might you be able to build a snowman?

- A** Denver
- B** Atlanta
- C** Mexico City
- D** Trenton

6. At which temperature does water boil?

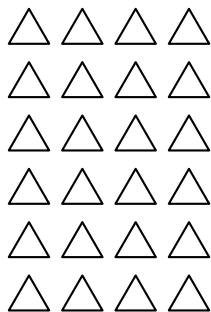
- F** 212°F
- G** 100°F
- H** 32°C
- J** 0°C

Name \_\_\_\_\_

## Using Arrays

Choose the correct letter for each answer.

1. Which multiplication sentence describes the array?



- A**  $6 \times 4 = 24$   
**B**  $6 \times 8 = 48$   
**C**  $8 \times 3 = 24$   
**D**  $8 \times 4 = 32$

2. There are 6 rows of students with 5 students in each row. Which shows the number of students in all?

- F**  $6 + 5 = 11$   
**G**  $6 \times 6 = 36$   
**H**  $6 \times 5 = 30$   
**J**  $5 \times 5 = 25$

3. A game board has 8 rows with 8 squares in each row. Which shows the total number of squares?

- A**  $4 \times 8 = 32$   
**B**  $8 \times 8 = 64$   
**C**  $4 \times 4 = 16$   
**D**  $2 \times 8 = 16$

4. Your garden has 2 rows of tomato plants and 2 rows of bean plants. There are 5 plants in each row. How many plants are in the garden?

- F** 10 plants  
**G** 15 plants  
**H** 20 plants  
**J** 25 plants

5. What number is missing?

$$9 \times 3 = 27 \text{ so } 3 \times \blacksquare = 27$$

- A** 3                      **C** 9  
**B** 6                      **D** 27

6. If  $8 \times 5 = 40$ , which product is also 40?

- F**  $6 \times 8$   
**G**  $5 \times 8$   
**H**  $5 \times 5$   
**J**  $8 \times 8$

7. Which has the same product as  $7 \times 4$ ?

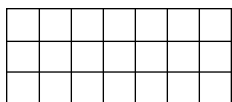
- A**  $7 \div 4$   
**B**  $4 \div 7$   
**C**  $4 + 7$   
**D**  $4 \times 7$

Name \_\_\_\_\_

## Making Arrays

Choose the correct letter for each answer.

1. Which multiplication sentence describes the array?



- A**  $3 \times 7 = 21$   
**B**  $4 \times 5 = 20$   
**C**  $5 \times 4 = 20$   
**D**  $6 \times 3 = 18$

2. Which multiplication sentence produces a square number?

- F**  $3 \times 4 = 12$   
**G**  $4 \times 4 = 16$   
**H**  $6 \times 1 = 6$   
**J**  $7 \times 6 = 42$

3. Which multiplication sentence describes the array?



- A**  $1 \times 3 = 3$   
**B**  $1 \times 4 = 4$   
**C**  $4 \times 1 = 4$   
**D**  $5 \times 1 = 5$

4. Which array represents the multiplication sentence?

$$2 \times 5 = 10$$

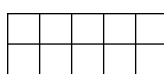
**F**



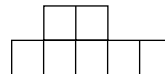
**H**



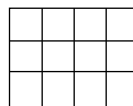
**G**



**J**



5. Which multiplication sentence describes the array?



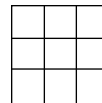
- A**  $3 \times 4 = 12$   
**B**  $6 \times 2 = 12$   
**C**  $12 \times 1 = 12$   
**D**  $2 \times 6 = 12$

6. Which array represents a square number?

**F**



**H**



**G**



**J**





Name \_\_\_\_\_

## Missing Factors

Choose the correct letter for each answer.

1. Which is the missing factor?

$$8 \times \blacksquare = 72$$

- A** 9
- B** 8
- C** 7
- D** 4

2. A small plane holds 8 passengers. How many of these planes are needed to carry 32 passengers?

- F** 40 planes
- G** 10 planes
- H** 4 planes
- J** 3 planes

3. A number is multiplied by 6. The product is 0. What is the number?

- A** 6
- B** 4
- C** 3
- D** 0

4. Which is the missing factor?

$$\blacksquare \times 9 = 45$$

- F** 8
- G** 7
- H** 6
- J** 5

5. There are 5 people in a helicopter rescue crew. There are always 6 helicopters on duty. How many people are on duty in all?

- A** 11 people
- B** 20 people
- C** 30 people
- D** 65 people

6. Which is the missing factor?

$$2 \times \blacksquare = 12$$

- F** 3
- G** 4
- H** 6
- J** 8

Name \_\_\_\_\_

## Dividing by 3

Choose the correct letter for each answer.

1.  $21 \div 3 =$

- |            |             |
|------------|-------------|
| <b>A</b> 5 | <b>D</b> 8  |
| <b>B</b> 6 | <b>E</b> NH |
| <b>C</b> 7 |             |

2. There were 15 pioneers. They rode west in 3 wagons. Each wagon had the same number of people. How many pioneers were in each wagon?

- |                     |                      |
|---------------------|----------------------|
| <b>F</b> 4 pioneers | <b>J</b> 12 pioneers |
| <b>G</b> 5 pioneers | <b>K</b> NH          |
| <b>H</b> 6 pioneers |                      |

3. What number belongs in the box to make this number sentence true?

$12 \div 3 = \square$

- |            |             |
|------------|-------------|
| <b>A</b> 3 | <b>C</b> 9  |
| <b>B</b> 4 | <b>D</b> 15 |

4. Tammy has 24 beads for necklaces. Each necklace uses 3 beads. How many necklaces can she make?

- |                       |                      |
|-----------------------|----------------------|
| <b>F</b> 21 necklaces | <b>J</b> 6 necklaces |
| <b>G</b> 12 necklaces | <b>K</b> NH          |
| <b>H</b> 8 necklaces  |                      |

5. Jean has 18 stickers. She put 3 stickers on each of her notebooks. Which number sentence tells how many notebooks Jean has?

- |                          |
|--------------------------|
| <b>A</b> $18 + 3 = 21$   |
| <b>B</b> $18 \div 3 = 6$ |
| <b>C</b> $18 - 3 = 15$   |
| <b>D</b> $3 + 3 = 6$     |

6. An orchestra has 27 musicians. They are seated in 3 equal rows. How many musicians are in each row?

- |                      |                      |
|----------------------|----------------------|
| <b>F</b> 6 musicians | <b>J</b> 9 musicians |
| <b>G</b> 7 musicians | <b>K</b> NH          |
| <b>H</b> 8 musicians |                      |

7.  $9 \div 3 =$

- |             |             |
|-------------|-------------|
| <b>A</b> 2  | <b>D</b> 27 |
| <b>B</b> 6  | <b>E</b> NH |
| <b>C</b> 12 |             |

8. Find the number that makes both number sentences true.

$3 \times \square = 15$	$15 \div 3 = \square$
-------------------------	-----------------------

- |            |            |
|------------|------------|
| <b>F</b> 4 | <b>H</b> 6 |
| <b>G</b> 5 | <b>J</b> 7 |

Name \_\_\_\_\_

## Finding Missing Numbers

Choose the correct letter for each answer.

1. Find the missing number.

$$24 \div \bullet = 4$$

- A 6
- B 8
- C 4
- D 12

2. Find the missing number.

$$\bullet \div 9 = 6$$

- F 15
- G 96
- H 63
- J 54

3. There are 6 peaches in each box. Joan has 7 boxes. Which division sentence could be used to find how many peaches Joan has?

- A  $7 \div 6 = \bullet$
- B  $6 \div 7 = \bullet$
- C  $\bullet \div 6 = 7$
- D  $6 \div \bullet = 7$

4. Find the missing number.

$$20 \div \bullet = 5$$

- F 5
- G 4
- H 3
- J 2

5. Find the missing number.

$$\bullet \div 2 = 8$$

- A 8
- B 10
- C 12
- D 16

6. Larry bought a jar of gold and silver marbles. He separated them into piles of 7 marbles each. He had 4 piles of gold and 5 piles of silver. Which division sentence could be used to find how many marbles Larry bought?

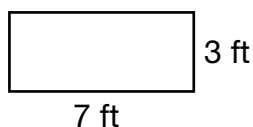
- F  $\bullet \div 7 = 4$
- G  $7 \div \bullet = 9$
- H  $7 \div 4 = \bullet$
- J  $\bullet \div 7 = 9$

Name \_\_\_\_\_

## Perimeter

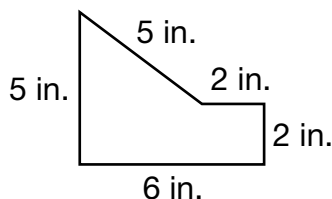
Choose the correct letter for each answer.

1. Which is the perimeter of this rectangle?



- A** 10 feet
- B** 17 feet
- C** 20 feet
- D** 21 feet

2. Which is the perimeter of this figure?

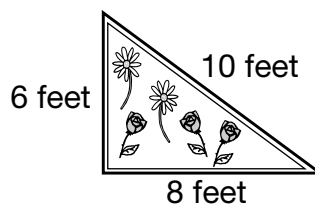


- F** 11 inches
- G** 13 inches
- H** 20 inches
- J** 30 inches

3. The sides of a square are 6 feet long. Which is its perimeter?

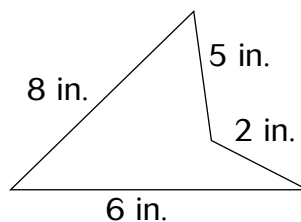
- A** 36 feet
- B** 24 feet
- C** 12 feet
- D** 6 feet

4. Harriet drew the sketch below of her flower garden. She wants to put a fence around the garden. How many feet of fencing does she need?



- F** 14 feet
- G** 16 feet
- H** 18 feet
- J** 24 feet

5. Which is the perimeter of this figure?



- A** 14 inches
- B** 16 inches
- C** 19 inches
- D** 21 inches

Name \_\_\_\_\_

## Multiplying Three-Digit Numbers

Choose the correct letter for each answer.

1. Mr. Garcia pays \$112 each month for his commuter train ticket. How much does he pay in 4 months?

**A** \$148                      **D** \$558  
**B** \$448                      **E** NH  
**C** \$458

2. 
$$\begin{array}{r} 724 \\ \times 5 \\ \hline \end{array}$$

**F** 3,500                      **J** 3,620  
**G** 3,520                      **K** NH  
**H** 3,600

3. Ed treated his friends to lunch. He bought himself and 2 friends a hamburger each. If the hamburgers were \$3.75 each, how much did Ed spend on lunch?

**A** \$7.50                      **D** \$15.00  
**B** \$11.25                      **E** NH  
**C** \$12.25

4. 
$$\begin{array}{r} 311 \\ \times 8 \\ \hline \end{array}$$

**F** 303                      **J** 2,488  
**G** 319                      **K** NH  
**H** 2,419

5.  $7 \times 542$

**A** 3,584                      **D** 3,894  
**B** 3,694                      **E** NH  
**C** 3,794

6. Last year 272 people ran in the marathon. This year twice as many people ran. How many people ran in the marathon this year?

**F** 244 people  
**G** 444 people  
**H** 454 people  
**J** 544 people  
**K** NH

7.  $9 \times 826$

**A** 7,284                      **D** 7,534  
**B** 7,384                      **E** NH  
**C** 7,424

8. Alexa has 3 boxes of labels. There are 220 labels in each box. How many labels does she have in all?

**F** 223 labels  
**G** 620 labels  
**H** 660 labels  
**J** 663 labels  
**K** NH

Name \_\_\_\_\_

## Multiplying Greater Numbers

Choose the correct letter for each answer.

1.  $3,658$

$\times 3$

- A** 9,854      **D** 10,974  
**B** 9,954      **E** NH  
**C** 10,874

2. There are 1,368 seats in each section of the arena. How many seats are in 4 sections?

- F** 4,242 seats    **J** 6,472 seats  
**G** 4,472 seats    **K** NH  
**H** 5,472 seats

3. A restaurant owner orders 2,750 napkins each week. How many napkins would be ordered in 5 weeks?

- A** 10,750 napkins  
**B** 13,750 napkins  
**C** 13,775 napkins  
**D** 137,500 napkins  
**E** NH

4.  $\$82.19$

$\times 6$

- F** \$493.14      **J** \$49,314  
**G** \$553.14      **K** NH  
**H** \$653.14

5. Basketballs were on sale for \$23.95 each. Coach Brown bought 8 basketballs for the team. How much money did Coach Brown spend?

- A** \$151.60      **D** \$1,916  
**B** \$191.50      **E** NH  
**C** \$201.60

6.  $4 \times 2,081 =$

- F** 6,324      **J** 8,324  
**G** 6,325      **K** NH  
**H** 8,024

7.  $9,120 \times 2 =$

- A** 1,824      **D** 20,340  
**B** 18,120      **E** NH  
**C** 18,240

8. There are 1,423 miles between Gina's house and her grandfather's house. How many miles would Gina have to travel to visit her grandfather two times?

- F** 2,696 miles    **J** 5,692 miles  
**G** 2,846 miles    **K** NH  
**H** 4,692 miles

Name \_\_\_\_\_

## Rounding Numbers

Choose the correct letter for each answer.

1. A boat costs \$8,699. Rounded to the nearest thousand dollars, how much did the boat cost?

**A** \$8,000      **D** \$9,000  
**B** \$8,600      **E** NH  
**C** \$8,700

2. The newspaper reported the attendance at the concert to be 364,918. What is the attendance rounded to the nearest ten thousand?

**F** 364,900      **J** 400,000  
**G** 365,000      **K** NH  
**H** 360,000

3. Which is 999,300,489 rounded to the nearest hundred?

**A** 999,300,000      **D** 1,000,000,000  
**B** 999,300,400      **E** NH  
**C** 999,300,490

4. Widget Mania, Inc., manufactured 2,487,200 trinkets last year. What is the number of trinkets they made rounded to the nearest hundred thousand?

**F** 2,500,000      **J** 2,000,000  
**G** 2,490,000      **K** NH  
**H** 2,400,000

5. Which is 25,314 rounded to the nearest ten thousand?

**A** 20,000      **D** 30,000  
**B** 25,000      **E** NH  
**C** 26,000

6. The 3-day sale at Rug World resulted in sales of \$190,848. What is the sales rounded to the nearest thousand?

**F** \$191,000      **J** \$190,000  
**G** \$190,900      **K** NH  
**H** \$190,800

7. The company raised \$17,517,859 for charity. Rounded to the nearest hundred thousand, how much money was raised?

**A** \$17,000,000      **D** \$18,000,000  
**B** \$17,500,000      **E** NH  
**C** \$17,500,900

8. Which is 163,219,299 rounded to the nearest ten?

**F** 163,220,000      **J** 160,000,000  
**G** 163,219,300      **K** NH  
**H** 163,219,290

Name \_\_\_\_\_

## Adding Greater Numbers

Choose the correct letter for each answer.

1. Jamaica scores 56,009 points on a computer game. Tyler has 45,334 points and Jermaine has 5,899 points. If these players add their points together, how many points will they have?

**A** 51,233 points  
**B** 61,908 points  
**C** 101,343 points  
**D** 107,242 points  
**E** NH

2. The Blazers soccer team spent \$913.47 on uniforms and \$352.05 on soccer balls. How much money did the Blazers spend?

**F** \$561.42      **J** \$1,365.52  
**G** \$1,265.52      **K** NH  
**H** \$1,275.52

3.  $712 + 3,592 + 13,025 + 4,821 =$

**A** 11,610      **D** 21,610  
**B** 20,610      **E** NH  
**C** 21,510

4.  $6,576 + 23,324 =$

**F** 28,900      **J** 30,000  
**G** 29,600      **K** NH  
**H** 29,800

5. The library checked out 3,559 books on Monday and 3,328 books on Tuesday. How many books did the library check out on these two days?

**A** 6,887 books      **D** 7,887 books  
**B** 6,987 books      **E** NH  
**C** 7,387 books

6.  $16,581 + 3,703 + 25,984 =$

**F** 45,278      **J** 46,368  
**G** 45,268      **K** NH  
**H** 46,268

7. The Cunningham family bought a couch for \$753.90, a chair for \$159.75, and a set of end tables for \$375.25. How much did they spend for all the furniture?

**A** \$913.65      **D** \$1,488.95  
**B** \$1,188.85      **E** NH  
**C** \$1,288.90

8.  $6,275 + 8,971 =$

**F** 14,146      **J** 15,246  
**G** 14,246      **K** NH  
**H** 14,946



Name \_\_\_\_\_

## Subtracting Two- and Three-Digit Numbers

Choose the correct letter for each answer.

1.  $50$   
 $- 29$

- A** 79                      **D** 21  
**B** 39                      **E** NH  
**C** 31

2. The Green Street Hotel is adding a new wing to be completed in the year 2006. The new wing will hold more rooms. The table shows how the current number of rooms will compare with the number of rooms in 2006.

Rooms at Green St. Hotel	
Current	352
2006	430

How many rooms are being added?

- F** 782 rooms  
**G** 182 rooms  
**H** 122 rooms  
**J** 78 rooms  
**K** NH

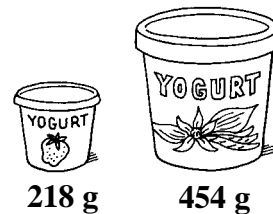
3.  $\$8.12 - \$2.90 =$

- A** \$11.02                      **D** \$4.82  
**B** \$6.22                      **E** NH  
**C** \$5.22

4. Of the 612 students at Jefferson School, 389 ride a bus to school. How many do not ride a bus?

- F** 223 students    **J** 377 students  
**G** 277 students    **K** NH  
**H** 323 students

5. The small yogurt has 218 grams. The large yogurt has 454 grams. How many more grams does the large yogurt have?



- A** 214 grams  
**B** 218 grams  
**C** 236 grams  
**D** 672 grams  
**E** NH

6.  $734 - 87 =$

- F** 643  
**G** 648  
**H** 753  
**J** 821  
**K** NH

Name \_\_\_\_\_

## Subtracting Greater Numbers

Choose the correct letter for each answer.

1.  $6,789 - 5,324 =$

- |                |              |
|----------------|--------------|
| <b>A</b> 1,465 | <b>D</b> 465 |
| <b>B</b> 1,365 | <b>E</b> NH  |
| <b>C</b> 965   |              |

2. A model airplane kit costs \$27.36. A model car kit costs \$11.99. How much more does the airplane kit cost?

- |                  |                  |
|------------------|------------------|
| <b>F</b> \$5.37  | <b>J</b> \$15.37 |
| <b>G</b> \$14.37 | <b>K</b> NH      |
| <b>H</b> \$15.27 |                  |

3.  $78,639$   
 $- 26,856$

- |                 |                 |
|-----------------|-----------------|
| <b>A</b> 50,683 | <b>D</b> 51,784 |
| <b>B</b> 50,783 | <b>E</b> NH     |
| <b>C</b> 51,683 |                 |

4. A haircut usually costs \$12.86 with tax. On Tuesdays, haircuts cost \$7.51. How much can Jay save if he has his hair cut on a Tuesday?

- F** \$4.35  
**G** \$5.25  
**H** \$5.35  
**J** \$15.35  
**K** NH

5. Thursday night 36,219 people bought tickets to the baseball game. Friday night 63,516 people bought tickets. How many more tickets were sold on Friday night?

- A** 26,997 tickets  
**B** 27,297 tickets  
**C** 27,397 tickets  
**D** 33,303 tickets  
**E** NH

6.  $5,823$   
 $- 3,798$

- |                |                |
|----------------|----------------|
| <b>F</b> 1,025 | <b>J</b> 2,175 |
| <b>G</b> 2,025 | <b>K</b> NH    |
| <b>H</b> 2,125 |                |

7. Students at Goodman School collected 1,829 cans. Students at Huntley School collected 1,620 cans. How many more cans did students at Goodman collect?

- |                   |                     |
|-------------------|---------------------|
| <b>A</b> 209 cans | <b>D</b> 3,499 cans |
| <b>B</b> 249 cans | <b>E</b> NH         |
| <b>C</b> 309 cans |                     |

8.  $55,691 - 32,592 =$

- |                 |                 |
|-----------------|-----------------|
| <b>F</b> 22,199 | <b>J</b> 23,099 |
| <b>G</b> 23,069 | <b>K</b> NH     |
| <b>H</b> 23,089 |                 |

Name \_\_\_\_\_

## Subtracting Across Zeros

Choose the correct letter for each answer.

1.  $3,000 - 1,095 =$

- |                |                |
|----------------|----------------|
| <b>A</b> 1,905 | <b>D</b> 4,095 |
| <b>B</b> 2,005 | <b>E</b> NH    |
| <b>C</b> 2,095 |                |

2. Felicia planted 135 bulbs in her garden. She began with 300 bulbs in all to plant. How many more bulbs does she still need to plant?

- |                    |                    |
|--------------------|--------------------|
| <b>F</b> 155 bulbs | <b>J</b> 435 bulbs |
| <b>G</b> 165 bulbs | <b>K</b> NH        |
| <b>H</b> 175 bulbs |                    |

3.  $84,909 - 24,199 =$

- |                  |
|------------------|
| <b>A</b> 60,710  |
| <b>B</b> 60,890  |
| <b>C</b> 109,108 |
| <b>D</b> 109,998 |
| <b>E</b> NH      |

4. Terry bought a notebook for \$3.28. He gave the clerk \$10.00. How much change should he get back?

- |                 |
|-----------------|
| <b>F</b> \$6.82 |
| <b>G</b> \$6.72 |
| <b>H</b> \$6.21 |
| <b>J</b> \$6.12 |
| <b>K</b> NH     |

5.  $87,004 - 25,987 =$

- |                 |                  |
|-----------------|------------------|
| <b>A</b> 60,017 | <b>D</b> 112,991 |
| <b>B</b> 61,017 | <b>E</b> NH      |
| <b>C</b> 62,983 |                  |

6. Mr. Flores must survey 5,000 people about their favorite fast-food choices. He has already surveyed 2,683 people. How many more people must he survey?

- |                |                |
|----------------|----------------|
| <b>F</b> 2,316 | <b>J</b> 3,317 |
| <b>G</b> 2,317 | <b>K</b> NH    |
| <b>H</b> 2,427 |                |

7. Max bought a new computer game for \$17.85. He paid with a \$20.00 bill. If the price included tax, how much change should Max receive?

- |                 |                 |
|-----------------|-----------------|
| <b>A</b> \$3.25 | <b>D</b> \$2.10 |
| <b>B</b> \$3.15 | <b>E</b> NH     |
| <b>C</b> \$2.25 |                 |

8. 
$$\begin{array}{r} 4,000 \\ - 2,981 \\ \hline \end{array}$$

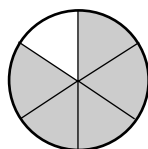
- |                |                |
|----------------|----------------|
| <b>F</b> 2,981 | <b>J</b> 1,019 |
| <b>G</b> 1,981 | <b>K</b> NH    |
| <b>H</b> 1,129 |                |

Name \_\_\_\_\_

## Parts of a Region

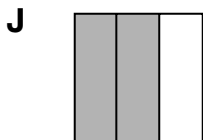
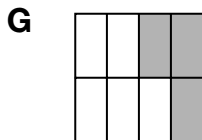
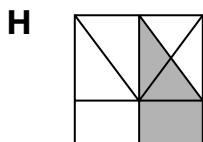
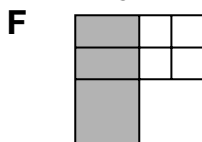
Choose the correct letter for each answer.

1. What fraction of the figure is not shaded?



- A  $\frac{1}{6}$                       C  $\frac{1}{3}$   
 B  $\frac{1}{4}$                       D  $\frac{5}{6}$

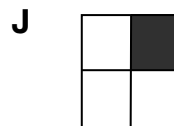
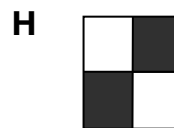
2. Which of these quilt pieces is exactly  $\frac{3}{8}$  shaded?



3. A flag is divided into 6 equal parts. Two of the parts are red. What fraction of the flag is not red?

- A  $\frac{1}{6}$                       C  $\frac{3}{6}$   
 B  $\frac{2}{6}$                       D  $\frac{4}{6}$

4. Which of these tile designs is exactly  $\frac{3}{4}$  white?



5. Marco spends 8 hours a day at school. He spends 2 hours a day in language arts and 1 hour in math. What fraction of his school day does he spend in language arts?

- A  $\frac{1}{8}$                       C  $\frac{3}{8}$   
 B  $\frac{2}{8}$                       D  $\frac{1}{2}$

6. Antonio was washing the patio door. The door had 12 panes of glass. He washed 5 of them, then he went to eat lunch. What fraction of the panes had he washed?



- F  $\frac{1}{12}$                       H  $\frac{7}{12}$   
 G  $\frac{5}{12}$                       J  $\frac{5}{7}$

Name \_\_\_\_\_



## Parts of a Set

Choose the correct letter for each answer.

1. Which group of circles has exactly  $\frac{5}{8}$  white circles?

A  C 

B  D 

2. What fraction of these dots is shaded?

F  $\frac{5}{12}$  H  $\frac{12}{5}$

G  $\frac{5}{7}$  J  $\frac{7}{12}$

3. Trevor has 9 marbles. Two of them are blue and 3 are green. The rest of the marbles are red. What fraction of the marbles is red?

A  $\frac{2}{9}$  C  $\frac{4}{9}$

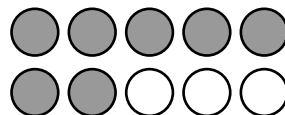
B  $\frac{3}{9}$  D  $\frac{5}{9}$

4. Allen has 8 crayons in a box. He breaks 2 red crayons and 1 blue one. What fraction of the crayons is not broken?

F  $\frac{1}{8}$  H  $\frac{3}{8}$

G  $\frac{2}{8}$  J  $\frac{5}{8}$

5. Which fraction shows the part of the group that is shaded?



A  $\frac{7}{10}$  C  $\frac{5}{10}$

B  $\frac{7}{1}$  D  $\frac{3}{10}$

6. Candice has 3 red apples, 4 green apples, and 5 yellow apples. What fraction of the apples is green?

F  $\frac{8}{12}$  H  $\frac{4}{12}$

G  $\frac{4}{8}$  J  $\frac{3}{12}$

7. A bag has 10 oranges. You use 6 oranges to make juice. What fraction of the oranges do you use to make juice?

A  $\frac{4}{10}$  C  $\frac{4}{6}$

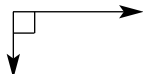
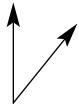
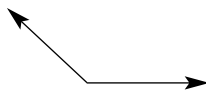
B  $\frac{6}{10}$  D  $\frac{6}{4}$

Name \_\_\_\_\_

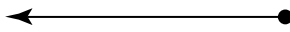
## Points, Lines, Segments, Rays, and Angles

Choose the correct letter for each answer.

1. Which is an obtuse angle?

- A** 
- B** 
- C** 
- D** Both A and B

2. Which is the name for the picture below?

- 
- F** Line
- G** Ray
- H** Line segment
- J** Intersecting lines

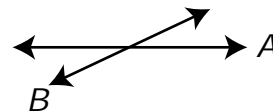
3. Which is the name for the point where two rays meet to form an angle?

- A** Vertex
- B** Ray
- C** Polygon
- D** Segment

4. Which kind of angle is made by the hands of a clock at 3:00 P.M.?

- F** Right
- G** Acute
- H** Obtuse
- J** Straight

5. Which is the relationship of Line A to Line B?



- A** Intersecting
- B** Parallel
- C** Perpendicular
- D** Both A and C

6. Train tracks are an example of which type of lines?

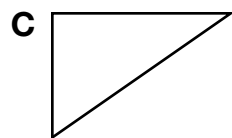
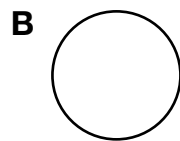
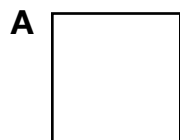
- F** Perpendicular
- G** Intersecting
- H** Parallel
- J** Both F and G

Name \_\_\_\_\_

# Polygons

Choose the correct letter for each answer.

1. Which of the following is NOT a polygon?



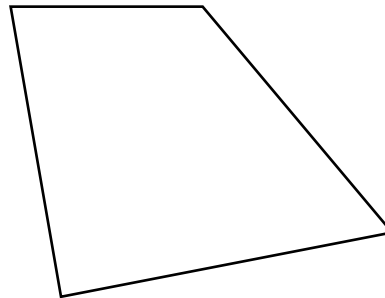
2. I am the same shape as a stop sign.  
I am a polygon. I have 8 sides. What is my name?

**F** Octagon  
**G** Pentagon  
**H** Quadrilateral  
**J** Triangle

3. Nikki is arranging her pencils to make a polygon. What is the fewest number of pencils she will need?

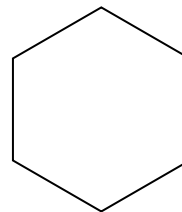
**A** 1                      **C** 3  
**B** 2                      **D** 4

4. What is the name of this figure?



**F** Octagon              **H** Quadrilateral  
**G** Pentagon             **J** Triangle

5. What is the name of this figure?



**A** Rectangle            **C** Hexagon  
**B** Pentagon              **D** Octagon

6. I am the shape of a famous building in Arlington, Virginia. I am named for a polygon. I have 5 sides. What is my name?

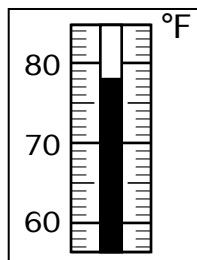
**F** Octagon  
**G** Pentagon  
**H** Quadrilateral  
**J** Triangle

Name \_\_\_\_\_

# Temperature

Choose the correct letter for each answer.

1. Which temperature is shown?



- A 83°F
- B 78°F
- C 75°F
- D 73°F

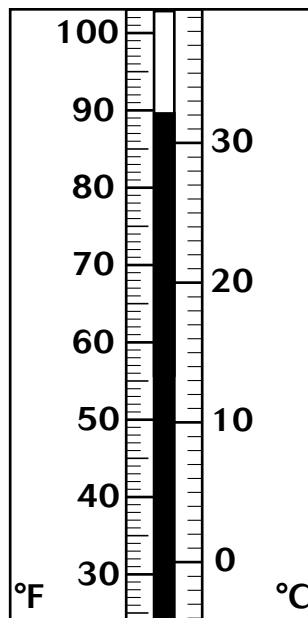
2. Which temperature is most appropriate for swimming at the beach?

- F  $-3^{\circ}\text{C}$
- G  $14^{\circ}\text{C}$
- H  $34^{\circ}\text{C}$
- J  $88^{\circ}\text{C}$

3. What is the difference between  $29^{\circ}\text{F}$  and  $66^{\circ}\text{F}$ ?

- A  $47^{\circ}\text{F}$
- B  $43^{\circ}\text{F}$
- C  $37^{\circ}\text{F}$
- D  $33^{\circ}\text{F}$

4. Which temperature is equivalent to  $32^{\circ}\text{C}$ ?



- |                        |                        |
|------------------------|------------------------|
| F $0^{\circ}\text{F}$  | H $32^{\circ}\text{F}$ |
| G $90^{\circ}\text{F}$ | J $60^{\circ}\text{F}$ |

5. Which is the best estimate for the temperature of a cold glass of milk?

- |                         |                        |
|-------------------------|------------------------|
| A $-12^{\circ}\text{C}$ | C $22^{\circ}\text{C}$ |
| B $2^{\circ}\text{C}$   | D $44^{\circ}\text{C}$ |

6. The temperature at noon is  $36^{\circ}\text{F}$ . It was  $9^{\circ}\text{F}$  colder at 8:00 A.M. What was the temperature at 8:00 A.M.?

- |                        |                        |
|------------------------|------------------------|
| F $45^{\circ}\text{F}$ | H $33^{\circ}\text{F}$ |
| G $37^{\circ}\text{F}$ | J $27^{\circ}\text{F}$ |



Name \_\_\_\_\_

## Adding and Subtracting Greater Whole Numbers

Choose the correct letter for each answer.

1. 
$$\begin{array}{r} 72,189 \\ + 23,556 \\ \hline \end{array}$$

- A** 96,635      **D** 45,633  
**B** 95,745      **E** NH  
**C** 95,635

2. William scores 79,890 points on a computer game. Sarah scores 58,009 points. How many more points did William score than Sarah?

- F** 21,881 points  
**G** 21,891 points  
**H** 21,899 points  
**J** 137,899 points  
**K** NH

3.  $36,042 + 7,898 =$

- A** 33,940  
**B** 43,830  
**C** 43,930  
**D** 43,940  
**E** NH

4.  $74,239 - 14,855 =$

- F** 89,094      **J** 59,384  
**G** 60,624      **K** NH  
**H** 59,624

5. Juan and Chris are partners. What is their total score?

Score Sheet	
Game	Score
Sean	35,908
Chris	22,970
Juan	14,988
Tamika	43,063
Yo	12,309

- A** 66,033  
**B** 58,878  
**C** 37,976  
**D** 37,958  
**E** NH

6. 
$$\begin{array}{r} 62,005 \\ - 11,003 \\ \hline \end{array}$$

- F** 51,002      **J** 71,002  
**G** 51,008      **K** NH  
**H** 53,002

7.  $4,445 + 821 + 5,966 =$

- A** 10,411      **D** 11,332  
**B** 11,132      **E** NH  
**C** 11,232

8. Jermaine has 45,334 points on a computer game. Tyler has 5,899 points. How many more points does Jermaine have?

- F** 39,335      **J** 40,565  
**G** 39,435      **K** NH  
**H** 40,465

Name \_\_\_\_\_

## Addition Properties

Choose the correct letter for each answer.

1. Which expression could you use to compute the sum, using compatible numbers?

$$75 + 38 + 25 =$$

- A  $(75 + 40) + 25$
- B  $(75 + 25) + 38$
- C  $(70 + 38) + 25$
- D  $(75 + 38) + 25$

2. Which expression could you use to compute the difference, using compatible numbers?

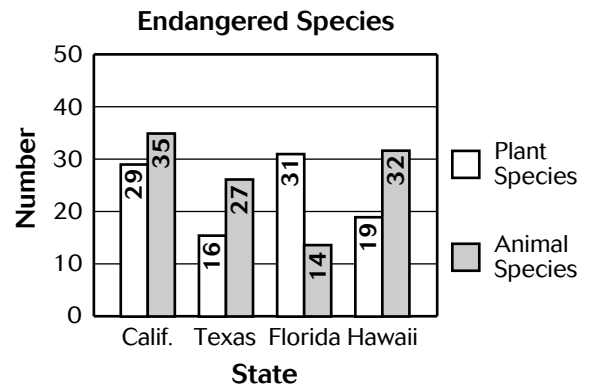
$$652 - 395 =$$

- F  $657 - 400$
- G  $650 - 395$
- H  $650 - 400$
- J  $652 - 400$

3.  $197 + 183 =$

- A 374
- B 380
- C 383
- D 386

Use the graph for Questions 4–5.



4. Find the total number of endangered plant and animal species in each state.

- F California: 64; Texas: 43; Florida: 45; Hawaii: 41
- G California: 64; Texas: 43; Florida: 45; Hawaii: 51
- H California: 35; Texas: 27; Florida: 31; Hawaii: 32
- J California: 6; Texas: 11; Florida: 17; Hawaii: 13

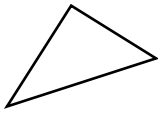
5. In all four states, how many more endangered animal species are there than endangered plant species?

- A 17
- B 12
- C 11
- D 13

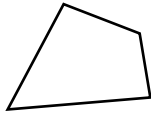
## Polygons

A **polygon** is a closed figure with three or more straight sides.

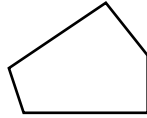
A polygon is classified by the number of sides it has. In a **regular** polygon, all the sides have the same length, and all the angles have the same measure.



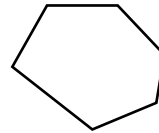
3 sides  
**triangle**



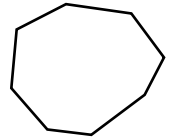
4 sides  
**quadrilateral**



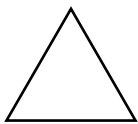
5 sides  
**pentagon**



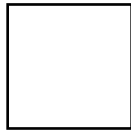
6 sides  
**hexagon**



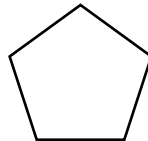
8 sides  
**octagon**



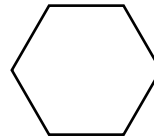
**regular**  
**triangle**



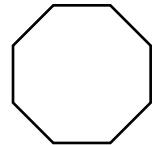
**regular**  
**quadrilateral**



**regular**  
**pentagon**



**regular**  
**hexagon**



**regular**  
**octagon**

### Example

**Classify the polygon and tell if it is regular.**

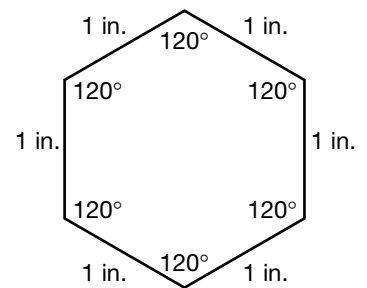
Count the sides. There are six sides, so the polygon is a hexagon.

Are the sides congruent? Yes. They all measure 1 inch.

Are the angles congruent? Yes. They are all  $120^\circ$ .

All sides and all angles are congruent, so the hexagon is regular.

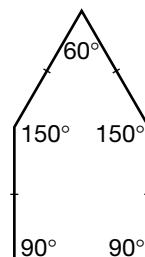
The polygon is a regular hexagon.



### Guided Practice

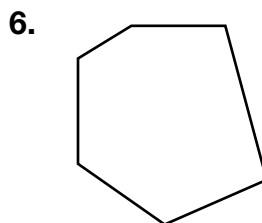
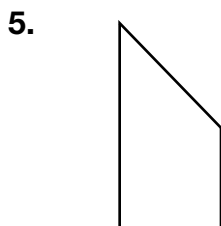
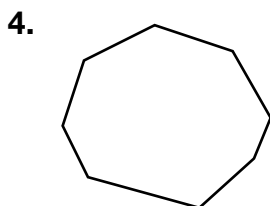
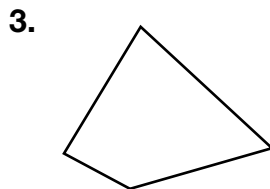
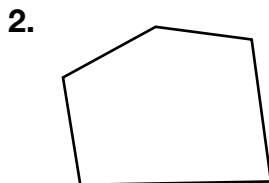
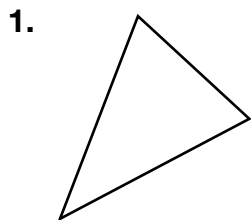
**Classify the polygon and tell if it is regular.**

1. How many sides does the polygon have? \_\_\_\_\_
2. Name the type of polygon. \_\_\_\_\_
3. Are the sides congruent? \_\_\_\_\_
4. Are the angles congruent? \_\_\_\_\_
5. Is the polygon regular? \_\_\_\_\_

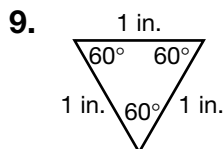
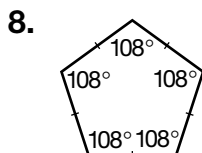
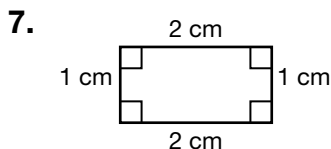


## Practice

Classify each polygon by the number of sides it has.



Tell whether each polygon is regular.



10. Jill cut a corner off a sheet of notebook paper. The larger of the two pieces was a pentagon. What kind of polygon was the corner piece? \_\_\_\_\_



11. What kind of polygon has 6 sides?

*Skill 4*

- A** hexagon      **C** octagon  
**B** pentagon    **D** quadrilateral

12. What is the measure of the complement of a  $54^\circ$  angle?

*Skill 1*

- F**  $26^\circ$       **H**  $116^\circ$   
**G**  $36^\circ$       **J**  $126^\circ$