Measuring Up

Convert each measurement. Use a calculator to check for accuracy.

12 inches (in.) = 1 foot (ft) 3 ft = 1 yard (yd)

1. **12 in.** = _____ ft   4. **24 ft** = _____ yd   7. **42 ft** = _____ yd

2. **1 yd** = _____ in.   5. **81 ft** = _____ yd   8. **11 ft** = _____ in.

3. **8 ft** = _____ in.   6. **12 yd** = _____ ft   9. **120 in.** = _____ ft

1 kilometer (km) = 1,000 meters (m)   10 dm = 100 centimeters (cm)
1 m = 10 decimeters (dm)   100 cm = 1,000 millimeters (mm)

10. **8 cm** = _____ m   13. **848 m** = _____ km   16. **45 m** = _____ dm

11. **15 km** = _____ m   14. **45 dm** = _____ m   17. **50 km** = _____ dm

12. **900 dm** = _____ cm   15. **100 dm** = _____ mm   18. **9 m** = _____ cm

Metric units of weight are **milligrams** (mg), **grams** (g), and **kilograms** (kg).

63 kg = _____ g   32 mg = _____ g   1 g = 1000 mg
 1 kg = 1000 g   1 mg = 0.001 g   1 kg = 1000 g
63 kg = (63 x 1000) g   32 mg = (32 x 0.001) g   1 mg = 0.001 g
63 kg = 63,000 g   32 mg = 0.032 g   1 g = 0.001 kg

19. **2000 mg** = _____ g   21. **250 mg** = _____ kg   23. **1500 mg** = _____ g

20. **4 kg** = _____ g   22. **90 g** = _____ mg   24. **18 g** = _____ mg

Geographic Wonders

What is the world's largest country? The largest desert? The smallest continent? Do this fraction match-up to discover the answers. Each geographic "wonder" listed below is followed by a fraction. <u>Reduce the fraction to its lowest terms.</u> Then correctly match it to one of the fractions in the right column and you'll find the name of the geographic wonder or its location. Write that name or place on the line.
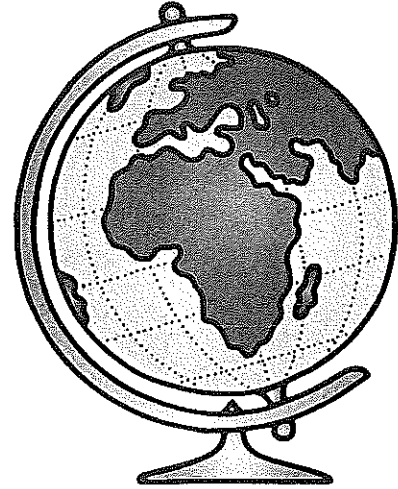
$\rightarrow$ Example : $\dfrac{15}{20} = \dfrac{3}{4}$

Geographic Wonders			**Place**
1. **World's largest desert**	$\dfrac{39}{312}$	_____	$\dfrac{1}{7}$ Australia
2. **Largest country (land)**	$\dfrac{2}{18}$	_____	$\dfrac{1}{5}$ China
3. **World's largest city**	$\dfrac{19}{38}$	_____	$\dfrac{1}{4}$ Canada
4. **Highest waterfall**	$\dfrac{100}{110}$	_____	$\dfrac{1}{8}$ Sahara
5. **Largest country (population)**	$\dfrac{6}{30}$	_____	$\dfrac{2}{3}$ Mammoth – Flint Ridge
6. **Smallest continent**	$\dfrac{3}{21}$	_____	$\dfrac{10}{11}$ Salto Angel in Venezuela
7. **Largest cave system**	$\dfrac{12}{18}$	_____	$\dfrac{1}{6}$ Nile
8. **World's highest mountain**	$\dfrac{3}{9}$	_____	$\dfrac{1}{3}$ Everest
9. **Second largest country**	$\dfrac{12}{48}$	_____	$\dfrac{1}{9}$ Russia
10. **World's longest river**	$\dfrac{5}{30}$	_____	$\dfrac{1}{2}$ Tokyo, Japan

Money Problems

Use the necessary operations, such as addition, subtraction, multiplication, and division, to solve the following money word problems. Do your work on a separate sheet of paper.
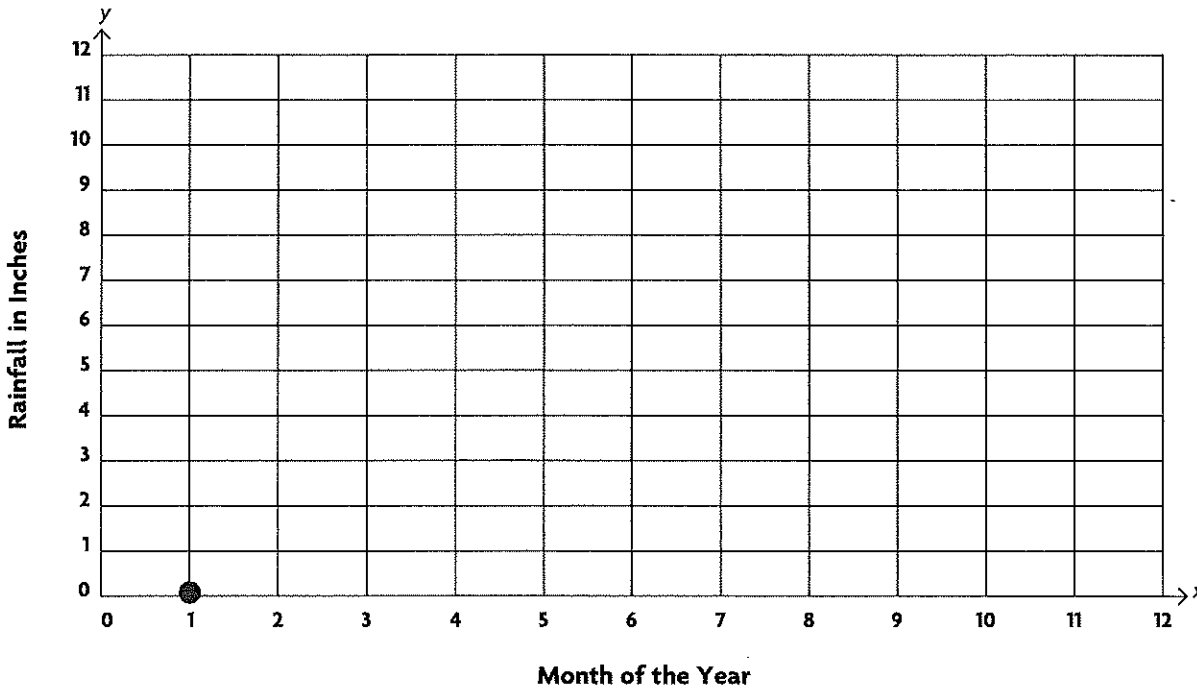
BOX YOUR FINAL ANSWER

1. Kia and Luc had $20.00 each to spend at the mall. They planned to shop first, then see a movie. Kia bought a T-shirt for $12.38; her movie ticket was $6.75. Luc rented two video games for $1.50 each, and his movie ticket was $6.75. How much did each person spend in all at the mall?

   Kia_____   Luc_____

2. Mark and Jon attend the same soccer camp. The camp costs $195.00 per person, per week. The boys also have to pay their own travel costs to and from camp. If the boys ride up and back together, they only spend $80.00 on gas. Find the total each boy will pay to cover camp and travel costs for a week.

3. Madison and Julia run a pet-sitting service for dogs. They charge $4.00 for dog walking, $12.00 for bathing, and $25.00 for overnight boarding. If a customer orders a bath with overnight boarding, the girls charge $30.00 for that combination. A new dog, Cash, is going to board overnight, have a bath, and go on two walks. What is the total cost for these services?

4. Frannie went to the local surf shop with $40.00. She bought some board wax and a skim board. The board cost $35.00, and wax cost $1.75. How much money does Frannie have left?

5. Mrs. Carney owns a restaurant. She has several lunch specials on the menu that are only $4.99 each. They include an entrée, a soup, and a beverage. This week, 72 customers ordered one of the specials. How much money did she make this week from the lunch specials?

   $4.99
   x   72

6. Mrs. Kaye owns a small amusement park with a water slide, a miniature golf course, and a two-mile zip line. A day pass for the water slide costs $45.00. One round of golf costs $15.00, and a zip line ride costs $36.00. What will Mrs. Kaye earn today if she sells 5 zip-line tickets, 22 water-slide day passes, and 10 rounds of golf?
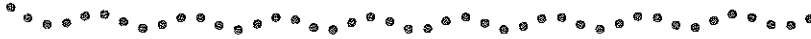
Plotting Coordinates on a Graph

Plot each of the given ordered pairs on the coordinate plane below. Note: Ordered pairs or "*coordinates*" are written with respect to the **x** axis & **y** axis (x, y). See example given.

Amy's Rainfall Record—2011

Rainfall in Inches

Month of the Year

1. (1, 0) ✔

2. (3, 4)

3. (6, 7)

4. (8,2)

5. (2,1)

6. (4,12)

7. (5,10)

8. (9,3)

9. (12,1)

10. (7, 2)

11. (10, 5)

12. (11, 6)

Multiply It!

Solve each multiplication word problem. Write the answer in the space provided.

show all work . box your final answer.

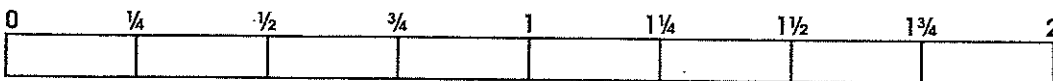|	
1. Each day after school, Carlos purchases yogurt and a banana for a total of $3.29. How much does Carlos spend on his snacks each week? $3.29 → 2 decimal places x 7 → 0 decimal places 23.23 2 **$23.03**	4. Mr. Richards sold 140 bushels of apples. If he receives $15.50 per bushel, how much money did he earn?
2. In July, the aquarium sold 5 times as many tickets as it did in June. The aquarium sold 987 tickets in June. How many tickets did the aquarium sell in July?	5. Sally collected 7 times as many aluminum cans to recycle as Alan. Alan collected 2,999 aluminum cans. How many cans did Sally collect for the recycling drive?
3. Peter saw in a newspaper ad that shirts were on sale at the mall for $23.45 each. If he purchased 6 shirts, how much would Peter spend?	6. Tony's printer is out of ink. Ink sets for his printer cost $18.49 for the color ink pack and $9.49 for the black ink pack. If Tony purchases 5 color packs and 9 black packs, how much will he spend in all?
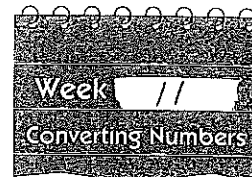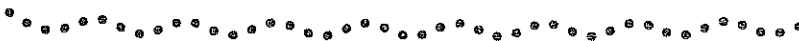
Using a Number Line

Use the first set of number lines to answer questions 1 through 5 below. Then, use what you know about decimals, fractions, percents, and how to convert them to fill in the missing values in the number lines at the bottom of this page.
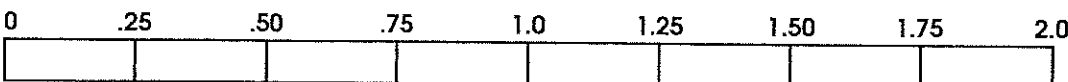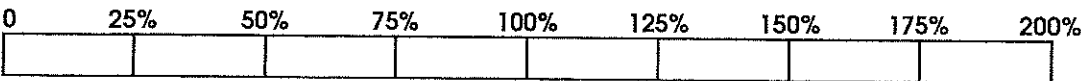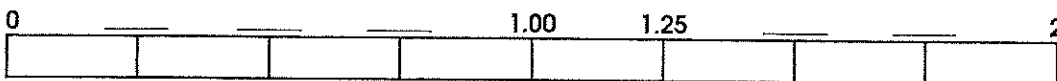
whole numbers:

0	1	2

fractions:

0	¼	½	¾	1	1¼	1½	1¾	2

decimals:

0	.25	.50	.75	1.0	1.25	1.50	1.75	2.0

percents:

0	25%	50%	75%	100%	125%	150%	175%	200%

1. What are the fraction and decimal equivalents for 25%? _____ & _____
   F   d

2. What is the decimal equivalent of 125%? _____
   d

3. What is the same as ½ when represented as a decimal and percent? _____ & _____
   d   %

4. What decimal amount is twice as much as 50%? _____
   d

5. List the decimal and percent equivalents for the value halfway between ¼ and ¾:

   a) decimal: _____ b) percentage: _____

Fill in the missing fractions:

0	¼	½	_____	_____	1¼	_____	_____	2

Fill in the missing decimals

0	_____	_____	1.00	1.25	_____	_____	2
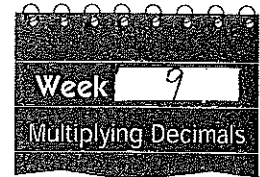
Multiplying Decimals

Review the rules for multiplying decimals. Then solve the problems.

Rules

1. *Multiply as you would whole numbers.*
2. *The number of decimal places in the product is the sum of the decimal places in the factors.*

Remember: *When you see a problem presented horizontally, line up the numbers on the right. Do **not** line up the decimal points.*

Example:

Factor	.4	1 decimal place
Factor	x .9	1 decimal place
Product	.36	2 decimal places

.35 x 0.8 =

Correct	Incorrect
.35	.35
x 0.8	x 0.8

1.   .6
    x .4

2.   9.4
    x 7.6

3.   3.1
    x 6.3

4.   2.9
    x 1.5

5.   6.8
    x 0.35

6.   9.27
    x 6.6

7.   2.2
    x 9.49

8.   5.99
    x 5.6

9.   4.8
    x 7.7

10.   5.6
    x 7.6

11.   2.9
    x 6.15

12.   8.6
    x 5.8

13.   2.23
    x 0.337

14.   1.6
    x 0.797

15.   0.72
    x 5.79

16.   7.71
    x 0.226

Fraction Subtraction

Find each difference. Reduce. Study the example below.

Example:

$$6\frac{2}{3} = \frac{20}{3} \times \frac{4}{4} = \frac{80}{12}$$

$$-3\frac{1}{4} = \frac{13}{4} \times \frac{3}{3} = \frac{39}{12}$$

$$\frac{41}{12} = \boxed{3\frac{5}{12}}$$

1. Change any mixed numbers to improper fractions.
2. Find the <u>least common denominator</u> and rewrite fraction.
3. Subtract. Reduce if necessary.
4. Box your final answer!

1. $8\frac{3}{4}$
   $-4\frac{2}{3}$

4. $16\frac{5}{8}$
   $-4\frac{3}{4}$

7. $6\frac{1}{2}$
   $-5\frac{1}{3}$

2. $10\frac{1}{3}$
   $-2\frac{2}{5}$

5. $8\frac{1}{2}$
   $-3\frac{2}{7}$

8. $14\frac{3}{8}$
   $-5\frac{3}{4}$

3. $9\frac{4}{5}$
   $-7\frac{6}{10}$

6. $8\frac{9}{10}$
   $-3\frac{2}{5}$

9. $12\frac{1}{2}$
   $-3\frac{1}{4}$

Every Number Has Its Place

Write each decimal in standard form on the lines below. Fit the number into the puzzle. The decimal points occupy one space and are already written in the puzzle.
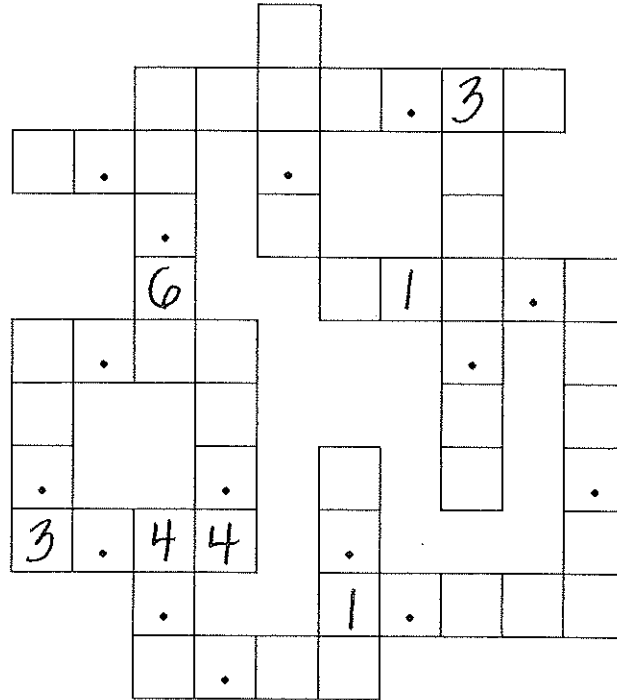
1. three and forty-four hundredths

   3.44

2. four and six tenths

   _____

3. forty-one and seven tenths

   _____

4. four thousand sixteen and thirty-two hundredths

   _____

5. nine hundred forty-seven and thirty-six hundredths _____

6. six and five tenths _____

7. fifty-six and four tenths _____

8. one and thirty-five hundredths _____

9. one and six thousandths _____

10. forty-five and sixty-three hundredths _____

11. fifteen and three tenths _____
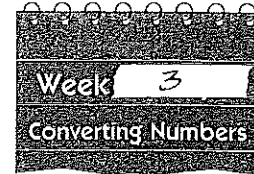
12. three hundred seventeen and nine tenths _____

13. three thousand seven and fifty-five hundredths _____

14. six and nineteen hundredths _____

15. six and ninety-nine hundredths _____

EX: /   .546
       ↑   ↑   thousandths
     tenths hundredths

Fractions, Decimals, and Percents

Write each fraction as a <u>percent</u>. Round to the nearest hundredth.
Follow these rules: 1) Change the fraction to a decimal (numerator ÷ denominator).
2) Change the decimal to a percent (multiply by 100). A percent compares a quantity to 100.
If you can make an equivalent fraction with a denominator of 100, then the numerator equals
the percent.

1. $\frac{3}{5}$ = _____ %

3. $\frac{4}{25}$ _____

5. $\frac{17}{25}$ _____

7. $\frac{67}{100}$ _____

2. $\frac{1}{2}$ _____

4. $\frac{22}{100}$ _____

6. $\frac{12}{50}$ _____

8. $\frac{11}{25}$ _____

Write each decimal as a percentage. **Remember:** Decimals that name hundreds can be
written easily as percentages because *percent* means "per hundred."

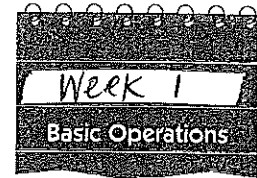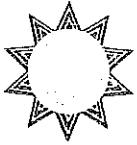9. **0.18** _____

11. **0.09** _____

13. **0.35** _____

15. **0.03** _____

10. **0.75** _____

12. **0.54** _____

14. **0.98** _____

16. **0.61** _____

Example: $0.45 = \frac{45}{100} = 45\%$

Reviewing the Basics

Solve the following problems. Be sure to watch the operations signs.
Show any remainders as fractions. **✳ Show all work !**

1. 2,498
    + 3,501

2. 8,905
    − 755

3. 1,987
    + 2,391

4. 7,533
    − 3,474

5. 6,664
    + 588

6. 72,819
    + 39,491

7. 16,528
    − 8,263

8. 729
    × 44

9. 5,555
    × 47

10. 8,904
    − 135

11. 1,527
    × 349

12. 871 x 415 =

13. 47 x 504 =

14. 783 ÷ 3 =

15. 387 ÷ 8 =

16. 62 x 35 =

17. 2,222 ÷ 11 =

18. 9 x 888 =

19. 1,862 ÷ 38 =

20. 60) 5,040

72

You may need to use a separate sheet of paper. Write neatly.