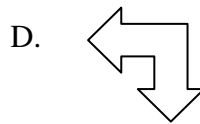# FOURTH GRADE MATHEMATICS
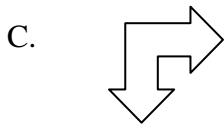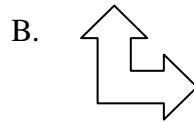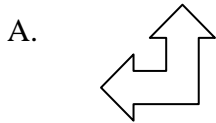
1. **Sara went roller-skating. It costs $3.50 for admission and $2.25 to rent skates. She paid with a $10.00 bill. How much change did Sara receive?** (no calculator)
   A. $2.75
   B. $4.25
   C. $5.25
   D. $5.75

Use the figure below to answer question 2.
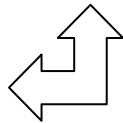
2. **Which figure shows a clockwise rotation of the figure above?**

   A.

   B.

   C.

   D.

FOURTH GRADE MATHEMATICS

Use the table below to answer question 3.

Days of Snow in 4 Months

November	❄	❄	❄	❄		
December	❄	❄	❄	❄	❄	❄
January	❄	❄	❄	❄	❄	
February	❄	❄	❄			

Each ❄ represents 3 days of snow.

3. **How many days did it snow in all 4 months?**
    A. 18 days
    B. 36 days
    C. 48 days
    D. 54 days

4. **What number sentence can be used to describe the number of 25-seat school busses (*b*) needed to transport 225 fourth graders to the zoo?**
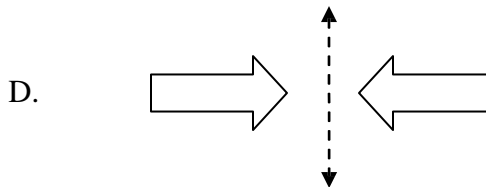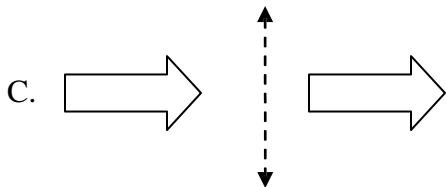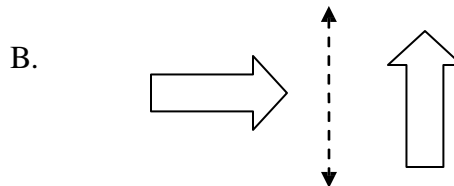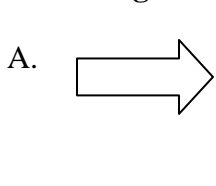   A. $225 \div b = 25$
    B. $225 - b = 25$
    C. $225 \times b = 25$
    D. $225 - 25 = b$

5. **What is the number 67.052 written in words?**
    A. sixty-seven thousand fifty-two
    B. sixty-seven and fifty-two hundredths
    C. sixty-seven and fifty-two thousandths
    D. sixty-seven thousand and five hundred two thousands

6. Which figure shows a reflection?

A.

B.

C.

D.

Use the figure below to answer question 7.
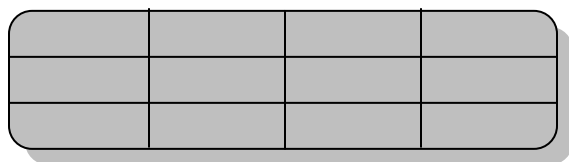
7. Hershey chocolate bars have 12 sections. Selina ate $\frac{4}{12}$ and gave her sister $\frac{3}{12}$. How much of the Hershey bar does Selina have left?

A. $\frac{1}{12}$

B. $\frac{5}{12}$

C. $\frac{7}{12}$

D. $\frac{10}{12}$

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8. Which model below is equivalent to the model

A.

B.

C.

D.
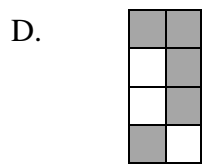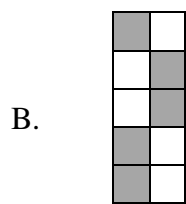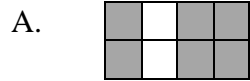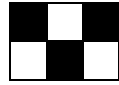
FOURTH GRADE MATHEMATICS

Use the diagram below to answer question 9.
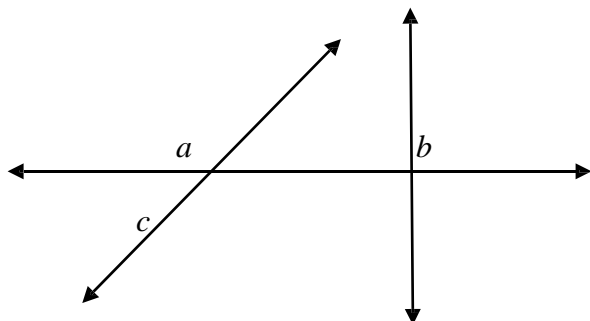
9. Which answer correctly identifies the angles above?
   A. Angle *a* is acute and angle *c* is obtuse
   B. Angle *b* is obtuse and angle *c* is right
   C. Angle *a* is obtuse and angle *c* is acute
   D. Angle *a* is right and angle *c* is acute

10. Which pair of figures shows a translation?

A.

B.

C.

D.

11. The lunch room has round tables that each seat 6 people. How many tables are needed to seat 174 people?
(no calculator)
   A. 6 tables
   B. 29 tables
   C. 168 tables
   D. 180 tables

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12. Multiply 38 x 100
(no calculator)

      A. 138
      B. 380
      C. 830
      D. 3,800

Use the diagram to answer question 13.
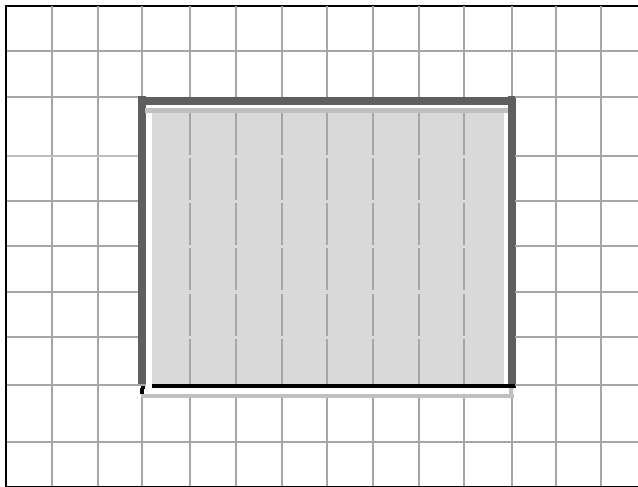
13. Ms. Roberts is planning a garden for her backyard. The picture above is the plan for her garden. Each square represents 1 square meter. What is the total area of her garden?

      A. 28 square meters
      B. 48 square meters
      C. 28 square meters
      D. 58 square meters

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Use the table below to answer question 14.

Average Weight of Animals
at the Minnesota Zoo

Animal	Weight in pounds
Lynx	45.64
Leopard	125.07
Lion	350.69

14. The weights of three animals are displayed on the table above. What is the weight of the Leopard rounded to the nearest tenth?

(no calculator)

    A. 120.7 pounds
    B. 125.0 pounds
    C. 125.1 pounds
    D. 126.0 pounds

Use the quadrilateral below to answer question 15.

15. Name the quadrilateral above.

    A. Rhombus
    B. Trapezoid
    C. Rectangle
    D. Parallelogram

16. How many groups of 30 are in 150?

(no calculator)

    A. 5
    B. 10
    C. 15
    D. 20

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17. Which digit is in the hundredths place in the number 154.207?
    A. 0
    B. 1
    C. 2
    D. 3

Use the shape below to answer question 18.

20 inches

30 inches   23 inches
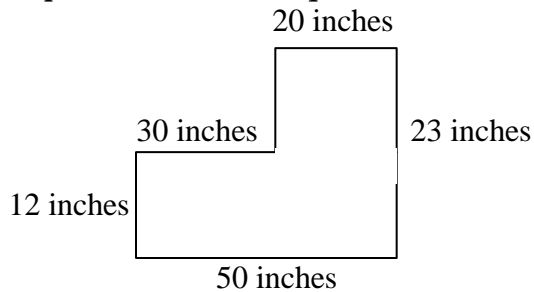
12 inches

50 inches

18. Naomi cuts a poster board in the shape above for her art project. What is the area of the poster board?
(no calculator)
    A. 1150 square inches
    B. 1060 square inches
    C. 820 square inches
    D. 135 square inches

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Use the table below to answer question 19.

Types of Books Read this Semester

Students	Mystery Books	Adventure Books
Henry	X	X
Sara	X	
James	X	X
Annika	X	
Catherine	X	X
Luke		X

19. Which Venn diagram represents the data in the table?

A.

Mystery   Adventure

2 3 1

B.

Mystery   Adventure

5 3 4

C.

Mystery   Adventure

3 1 2

D.

Mystery   Adventure

2 2 2
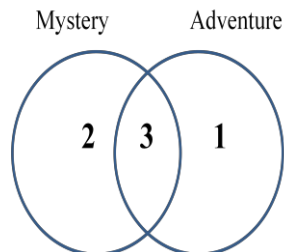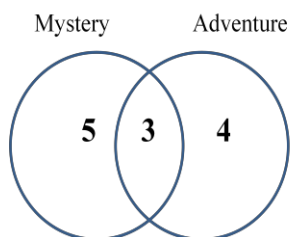
20. When *m* is replaced with the number 7, which number sentence is true?

    A. $27 \div 3 = 3 + m$

    B. $6 \times m = 25 + 17$

    C. $35 \div m = 54 - 47$

    D. $8 \times 7 = 67 - m$

FOURTH GRADE MATHEMATICS

21. A test found that a light bulb has an average life of 104 days. What is the average life of a light bulb in hours if the bulb burns continuously for 24 hours each day?
(no calculator)

    A. 5,000 hours
    B. 2,496 hours
    C. 128 hours
    D. 80 hours

Use the figures to answer question 22.

22. Which answer describes the set of triangles in the order shown above?
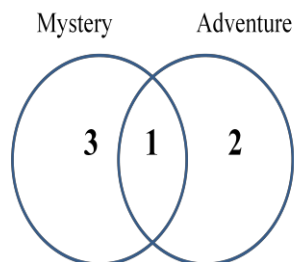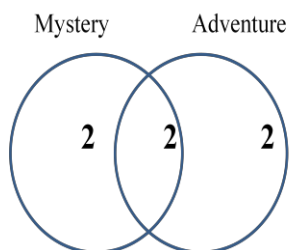   A. obtuse, acute, right, equilateral
    B. acute, equilateral, obtuse, right
    C. acute, obtuse, right, equilateral
   D. obtuse, equilateral, right, acute

23. Ruby wants to buy 12 cookies and 4 bottles of juice to share with her classmates. The cookies cost 54 cents each and the juice is 42 cents for one bottle. How much change will Ruby receive if she gives the clerk $20?
(no calculator)

    A. $6.48
    B. $8.16
    C. $11.84
    D. $13.52

FOURTH GRADE MATHEMATICS

Use these angles to answer question 24.

Angle H   Angle S   Angle K   Angle M
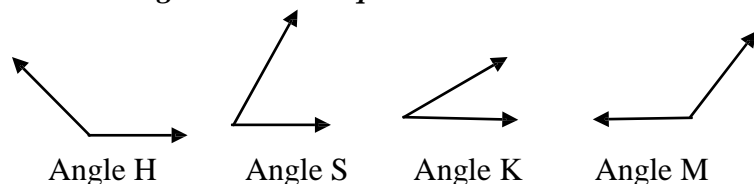
24. Which angles measure less than a right angle?
- A. Angle H and Angle S
- B. Angle M and Angle S
- C. Angle H and Angle K
- D. Angle S and Angle K

Use the table below to answer question 25.

Gray Whale Heartbeats per Minute

Heartbeats	8	16	24			
Minutes	1	2	3	4	5	6

25. Which numbers below complete the table for the heartbeats of a gray whale in 4, 5 and 6 minutes?
- A. 40, 64, 104
- B. 48, 96, 192
- C. 32, 40, 48
- D. 32, 36, 40

Use the numbers below to answer question 26.

15.94   15.49   15.409   15.049

26. Which answer shows the numbers from least to greatest?
- A. 15.94   15.49   15.409 15.049
- B. 15.049 15.409 15.49   15.94
- C. 15.49   15.409 15.049 15.94
- D. 15.409 15.94   15.49   15.049

FOURTH GRADE MATHEMATICS

27. Jane buys 6 packages of pencils. Each package has 8 pencils. How many pencils did Jane buy?

(no calculator)

    A. 2 pencils

    B. 14 pencils

    C. 48 pencils

    D. 56 pencils

28. An opossum sleeps an average of 19 hours per day. How many hours does an opossum sleep during a 29-day period?

(no calculator)

    A. 48 hours

    B. 133 hours

    C. 532 hours

    D. 551 hours

Use the following number line to answer question 29.
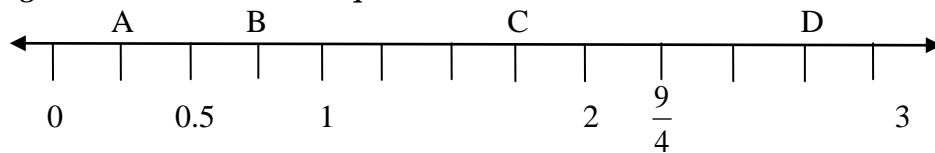
29. Where is the mixed number $2\frac{3}{4}$ located on the number line?

    A. A

    B. B

    C. C

    D. D

FOURTH GRADE MATHEMATICS

ANSWERS

1. **B 4.1.1.5** Number & Operation (solve multi-step real-world problems)

2. **B 4.3.3.3** Geometry & Measurement (apply 90 degree rotations (turns) clockwise or counterclockwise)

3. **D 4.4.1.1** Data Analysis (display data sets)

4. **A 4.2.2.1** Algebra (interpret number sentences with unknowns)

5. **C 4.1.2.4** Number & Operation (read and write decimals)

6. **D 4.3.3.2** Geometry & Measurement (apply reflections (flips))

7. **B 4.1.2.3** Number & Operation (use fraction models to add and subtract)

8. **B 4.1.2.1** Number & Operation (represent equivalent fractions using models)

9. **C 4.3.2.2** Geometry & Measurement (classify angles)

10. **D 4.3.3.1** Geometry & Measurement (apply translations (slides) to figures)

11. **B 4.1.1.6** Number & Operation (division)

12. **D 4.1.1.2** Number & Operation (multiply multi-digit numbers by powers of ten)

13. **B 4.3.2.3** Geometry & Measurement (area of two-dimensional figures by counting)

14. **C 4.1.2.7** Number & Operation (rounding decimals to the nearest tenth)

15. **D 4.3.1.2** Geometry & Measurement (naming quadrilaterals)

16. **A 4.1.1.6** Algebra (use strategies and algorithms to divide)

17. **A 4.1.2.6** Number & Operation (know fraction and decimal equivalences)

18. **C 4.3.2.4** Geometry & Measurement (finding area by dividing into rectangles)

19. **A 4.4.1.1** Data Analysis (interpret data in Venn diagrams)

20. **B 4.2.2.2** Algebra (number sentences with unknown)

21. **B 4.1.1.4/4.1.1.5** Number & Operation (solving and estimating products)

FOURTH GRADE MATHEMATICS

22. **A 4.3.1.1** Geometry & Measurement (classify triangles)

23. **C 4.1.1.5** Number & Operation (solve multi-step real-world problems)

24. **D 4.3.2.2** Geometry & Measurement (compare angles according to size)

25. **C 4.2.1.1** Algebra (record inputs and outputs)

26. **B 4.1.2.5** Number & Operation (compare and order decimals)

27. **C 4.1.1.1** Number & Operation (demonstrate fluency with multiplication and division)

28. **D 4.1.1.3** Number & Operation (multiply multi-digit numbers)

29. **D 4.1.2.2** Number & Operation (locate fraction on a number line)