

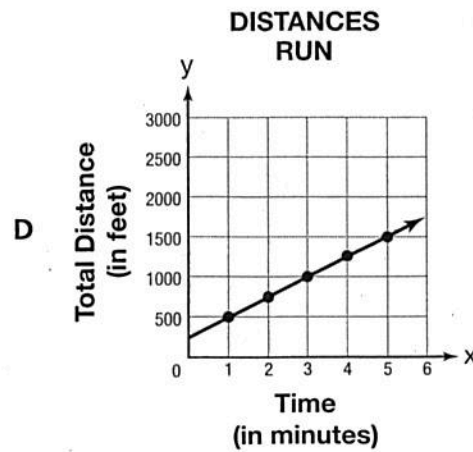
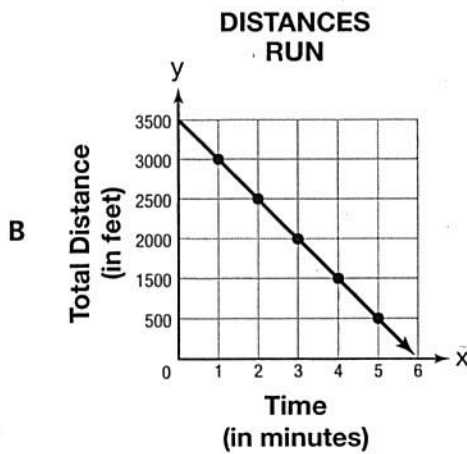
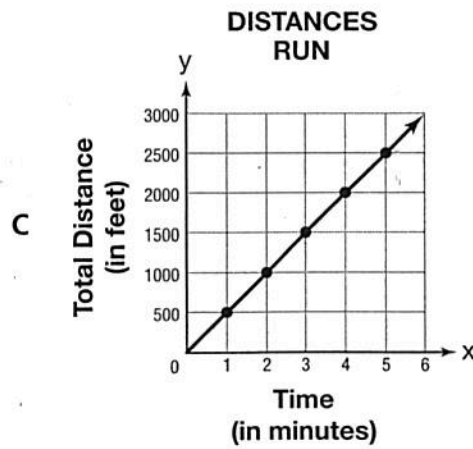
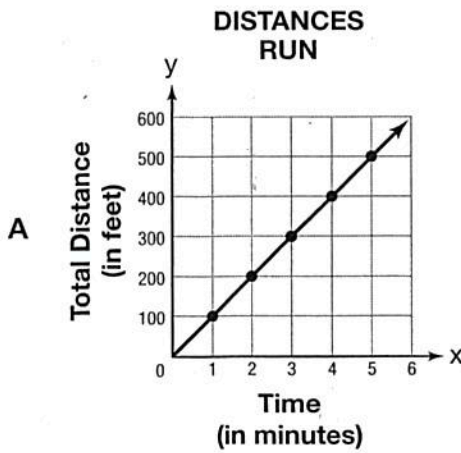
- 1 Carole owed \$74 on her credit card. She then spends \$28 on groceries. What is the balance on Carole's credit card after she buys groceries?
- A -\$102
  - B -\$46
  - C \$46
  - D \$56
- 2 Which words can be used to describe the expression  $5(x + 6)$ ?
- A 6 plus the product of 5 and  $x$
  - B 5 plus  $x$  times 6
  - C the quantity 5 times  $x$  plus 6
  - D 5 times the sum of  $x$  and 6

- 3 Dyneika is training for a long-distance race. The table below shows the relationship between the number of minutes she has been running and the total distance she has run.

**DISTANCES RUN**

Time in Minutes ( $x$ )	Distance in Feet ( $y$ )
1	500
2	1,000
3	1,500
4	2,000
5	2,500

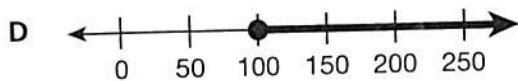
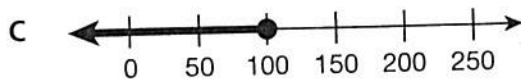
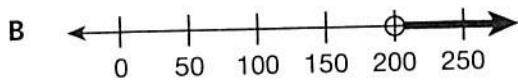
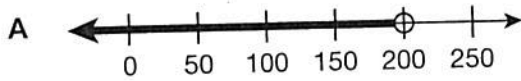
Which graph shows this relationship?



- 4 Una has 3 times as many coins in her collection as Chase has in his. If  $c$  represents the number of coins Chase has in his collection, which expression represents the number of coins Una has in her collection?

- A  $3 \div c$
- B  $3 - c$
- C  $3c$
- D  $3 + c$

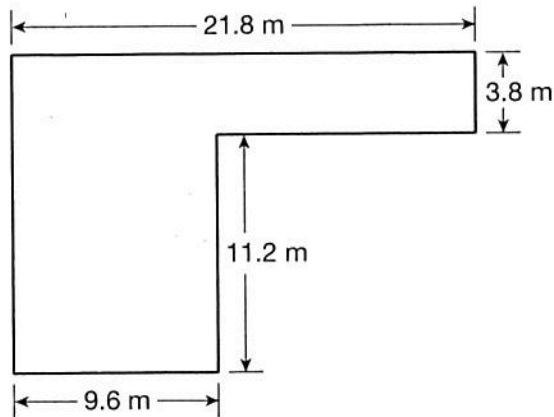
- 5 Dion needs to save more than \$200 to go on vacation with her friends. Which number line shows all the possible amounts Dion can save?



- 6 Mrs. Green's class orders 3 pizzas that cost \$18.95 each for a class party. Mrs. Green uses two \$5 off coupons to help pay for the pizzas. How much money is needed to pay for the pizzas?

- A \$8.95
- B \$26.85
- C \$46.85
- D \$56.85

- 7 The figure below shows the shape and size of the part of the ground covered by the welcome center at an outdoor art park.



[not drawn to scale]

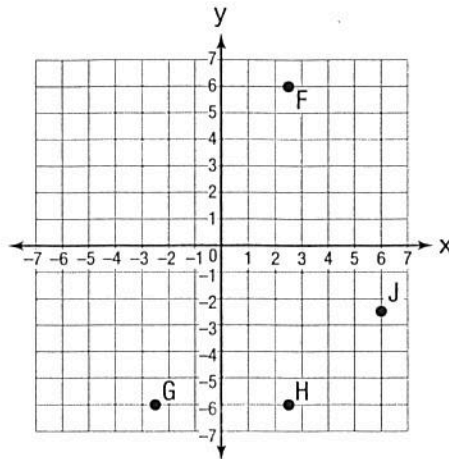
What is the area of the ground that is covered?

- A 153.88 square meters
- B 190.36 square meters
- C 226.84 square meters
- D 463.64 square meters

8 Kristine is  $5\frac{1}{2}$  feet tall. Her sister Colleen is 57 inches tall. Which of the following is true of their heights?

- A Kristine is exactly 8 inches taller than Colleen.
- B Kristine is exactly 9 inches taller than Colleen.
- C Colleen is exactly 8 inches taller than Kristine.
- D Colleen is exactly 9 inches taller than Kristine.

9 Which point is located at  $(2.5, -6)$ ?

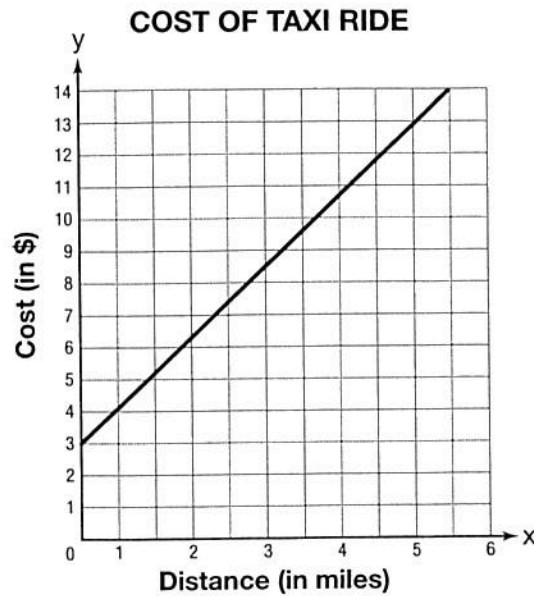


- A point F
- B point G
- C point H
- D point J

- 10 The length of a line segment is 11 units. One endpoint of the line segment is  $R(-2, 1)$ . Which point could be the other endpoint of the line segment?
- A  $A(-13, -10)$
  - B  $B(-2, -11)$
  - C  $C(9, 1)$
  - D  $D(11, 1)$
- 11 Which expression is equivalent to  $15x - 6$ ?
- A  $6(9x - 1)$
  - B  $5(3x - 6)$
  - C  $3(5x - 2)$
  - D  $3(5x - 6)$
- 12 Andrew's hourly wage is \$12.25 per hour. This is \$2.50 per hour more than Kim earns. Which shows an equation that can be used to find Kim's hourly wage and its solution?
- A  $2.50x = 12.25; x = 4.90$
  - B  $x + 2.50 = 12.25; x = 9.75$
  - C  $x + 2.50 = 12.25; x = 14.75$
  - D  $12.25 + 2.50 = x; x = 14.75$



- 13 The graph below shows how much a taxi charges for rides of different distances.



What are the dependent and independent variables in the graph?

- A Cost and distance are both independent variables.
  - B Cost and distance are both dependent variables.
  - C Cost is the independent variable; distance is the dependent variable.
  - D Cost is the dependent variable; distance is the independent variable.
- 14 Which value of  $x$  makes the inequality  $\frac{1}{3}x < 5$  true?

- A  $x = 12$
- B  $x = 15$
- C  $x = 18$
- D  $x = 30$

**15** A parallelogram is drawn on a coordinate plane. Its vertices are located at  $(-1, 1)$ ,  $(2, 5)$ ,  $(4, 1)$ , and  $(7, 5)$ . Which comparison of the parallelogram's base and height is correct?

- A The height is 5 units longer than the base.
- B The base is 5 units longer than the height.
- C The height is 1 unit longer than the base.
- D The base is 1 unit longer than the height.

**16** What is the value of the expression below?

$$3.22 \div 1.4$$

- A 0.023
- B 0.23
- C 2.3
- D 23

**17** Which number of dollars represents a debt greater than \$45.25?

- A  $-45.75$
- B  $-45$
- C 45
- D 45.75

**18** The opposite of the opposite of a number is 9. What is the number?

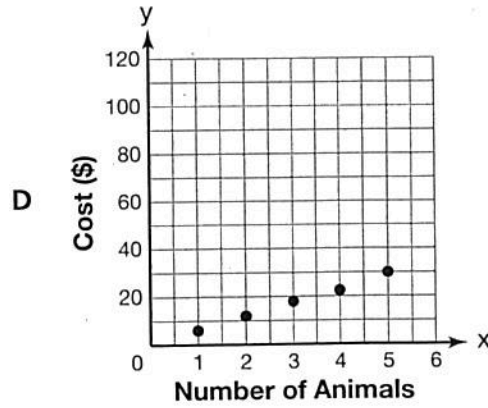
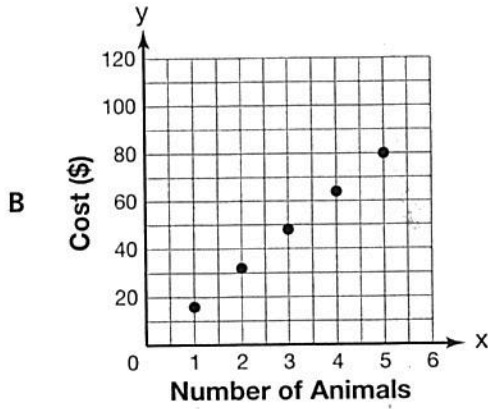
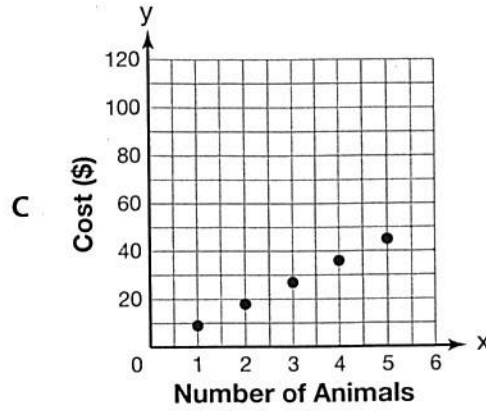
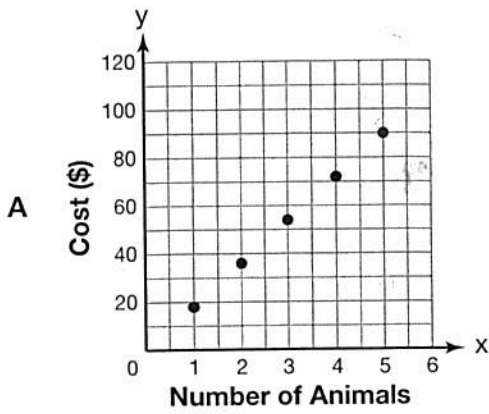
- A  $-9$
- B  $-\frac{1}{9}$
- C  $\frac{1}{9}$
- D 9



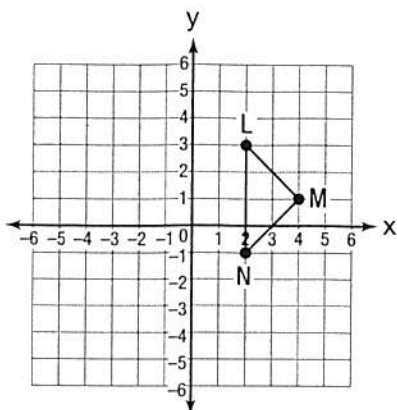
- 19 Which expression is equivalent to  $3(x - 4) + 2$ ?
- A  $3x - 2$
  - B  $3x - 32$
  - C  $3x - 14$
  - D  $3x - 10$
- 20 There are 12 boys and 10 girls in the hiking club at Josh's school. Which statement about the students in the hiking club is true?
- A Five out of every 11 students are boys.
  - B The ratio of girls to boys is 6:5.
  - C The ratio of students to boys is  $\frac{6}{11}$ .
  - D For every 6 boys, there are 5 girls.
- 21 Which equation shows the correct value of 4 with an exponent of 3?
- A  $4^3 = 64$
  - B  $4^3 = 12$
  - C  $3^4 = 81$
  - D  $3^4 = 12$

22

Andre carves small wooden animals that he sells at a craft fair. He sells 2 animals for \$18. Which graph shows the cost of 1 to 5 animals?

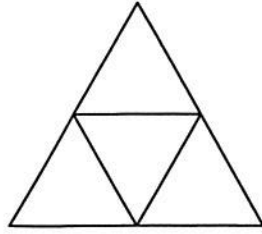


- 23 Triangle LMN is shown on the grid below.



- What is the length of side  $\overline{LN}$ ?
- A 2 units
  - B 3 units
  - C 4 units
  - D 5 units
- 24 Wayne shovels snow to earn extra money. He charges \$15 per hour for his services. A customer paid him \$60 for shoveling out his driveway, his two cars, and a path to his door.
- For how long did Wayne shovel snow?
- A  $\frac{1}{4}$  hour
  - B 4 hours
  - C 6 hours
  - D 45 hours

- 25 Which three-dimensional figure can be made by folding the net?



- A triangular pyramid  
B triangular prism  
C square pyramid  
D rectangular pyramid
- 26 Alison is growing basil in a rectangular section of her garden. This section is  $\frac{5}{6}$  yard long and has an area of  $\frac{1}{6}$  square yard. What is the width of the section?
- A  $\frac{1}{5}$  yard  
B  $\frac{5}{18}$  yard  
C  $\frac{1}{2}$  yard  
D  $2\frac{1}{2}$  yards

- 27 Talia is drawing a rectangle on a coordinate plane that has a perimeter of 14 units. Two vertices of the rectangle are located at  $(-3, -1)$  and  $(1, -1)$ . Where should Talia plot the remaining vertices so that each vertex is in a different quadrant?
- A  $(-3, -4)$  and  $(1, -4)$
  - B  $(-3, 5)$  and  $(1, 5)$
  - C  $(-3, 2)$  and  $(1, 2)$
  - D  $(-3, 1)$  and  $(1, 3)$
- 28 At the farmers market, cherry tomatoes cost \$4.50 for 3 pounds, and heirloom tomatoes cost \$5.98 for 2 pounds. What is the difference in the unit costs of the tomatoes?
- A \$1.54
  - B \$1.49
  - C \$1.48
  - D \$0.49

**STOP**

**29** Dan earns an annual salary of \$85,608. How much does he earn every month?

- A \$6,144
- B \$7,134
- C \$7,144
- D \$7,234

**30** A natural food market sells organic granola in bulk for \$1.60 per ounce. Which of the following statements is true?

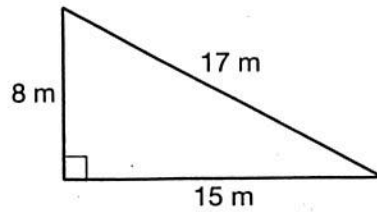
- A It would cost \$0.20 to buy 8 ounces of granola at the market.
- B It would cost \$13.60 to buy 12 ounces of granola at the market.
- C It would cost \$16.16 to buy 16 ounces of granola at the market.
- D It would cost \$38.40 to buy 24 ounces of granola at the market.

**31** The greatest common factor of 40 and 64 is the least common multiple of a pair of numbers. Which two numbers could they be?

- A 8 and 12
- B 5 and 8
- C 4 and 8
- D 2 and 4



- 32 What is the area of the figure shown?



[not drawn to scale]

- A 600 square meters  
B 120 square meters  
C 60 square meters  
D 40 square meters
- 33 Shawn drew a number line that went from  $-10$  to  $10$  and used it to compare integers. Which statement is true?
- A  $-4 < -2$  because  $-4$  is located to the left of  $-2$  on the number line.  
B  $-4 > 2$  because  $-4$  is located to the left of  $2$  on the number line.  
C  $-4 > 0$  because  $-4$  is located to the left of  $0$  on the number line.  
D  $2 < 0$  because  $2$  is located to the right of  $0$  on the number line.
- 34 Felipe makes salads at a restaurant. On average, Felipe can make 12 salads in 20 minutes. At that rate, how many salads could Felipe make in 45 minutes?
- A 27  
B 30  
C 56  
D 75

**35** Which pair of expressions is equivalent?

- A  $20p - 18$  and  $2(10p - 16)$
- B  $g + g + g$  and  $g^3$
- C  $3z + 26$  and  $3z + 62$
- D  $8(2r + 3)$  and  $16r + 24$

**36** Which of these problems could be solved using the equation  $16x = 80$ ?

- A Marisol has 80 baseball cards. That is 16 more than her brother Ernesto has. How many baseball cards does Ernesto have?
- B Marisol has 16 baseball cards. That is 80 more than her brother Ernesto has. How many baseball cards does Ernesto have?
- C Marisol has 16 baseball cards. That is 80 times more than her brother Ernesto has. How many baseball cards does Ernesto have?
- D Marisol has 80 baseball cards. That is 16 times more than her brother Ernesto has. How many baseball cards does Ernesto have?

**37** Which expression is equivalent to  $6^3$ ?

- A  $6 \times 3$
- B  $3 \times 3 \times 3$
- C  $6 \times 6 \times 6$
- D  $3 \times 3 \times 3 \times 3 \times 3 \times 3$

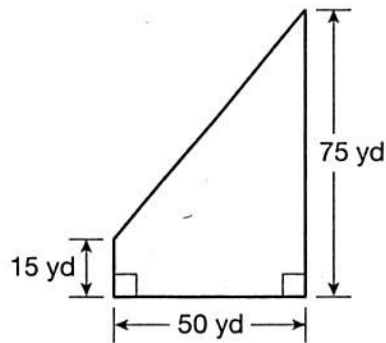
38

Emma earns \$12.50 an hour at her summer job. Let  $w$  represent the wages Emma earns and  $t$  represent time in hours. Which equation relates the amount Emma earns to the number of hours she works?

- A  $w = 12.5t$
- B  $t = 12.5w$
- C  $t = \frac{12.5}{w}$
- D  $w = 12.5 + t$

39

Miller Elementary School is planting grass on a new recess field. The dimensions of the field are shown below.



[not drawn to scale]

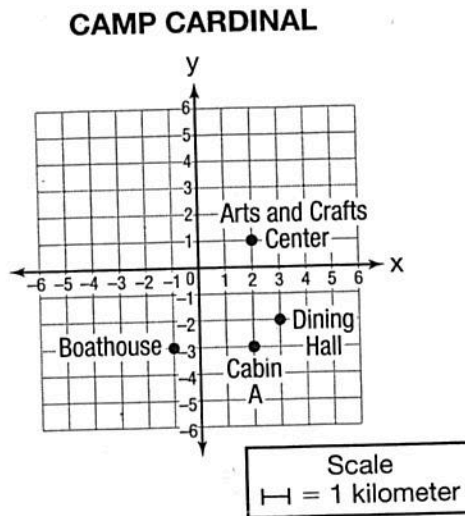
Which equation shows the area of the field?

- A  $15 + 50 + 75 = 140$  square yards
- B  $\frac{1}{2}(50)(75) = 1,875$  square yards
- C  $(50)(75) - \frac{1}{2}(75)(50) = 1,875$  square yards
- D  $(50)(75) - \frac{1}{2}(60)(50) = 2,250$  square yards

40 What is the area of the triangle formed by the vertices  $(-5, 8)$ ,  $(1, 3)$ , and  $(7, 8)$ ?

- A 5 square units
- B 30 square units
- C 36 square units
- D 60 square units

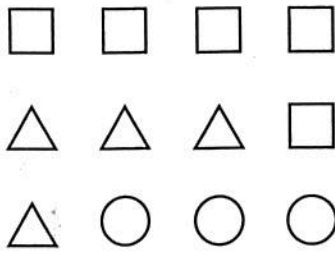
41 A map of Camp Cardinal is shown below.



What is the distance from Cabin A to the boathouse?

- A 1 kilometer
- B 2 kilometers
- C 3 kilometers
- D 4 kilometers

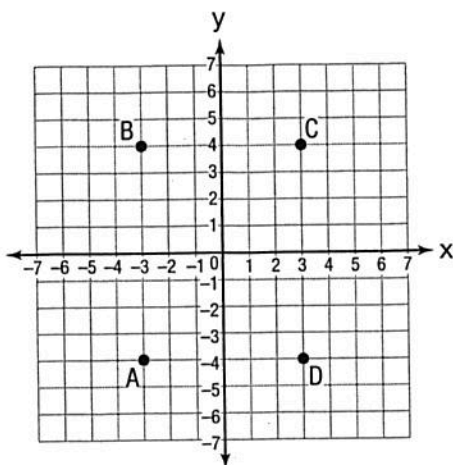
- 42 Sophia drew the figures below on a sheet of paper.



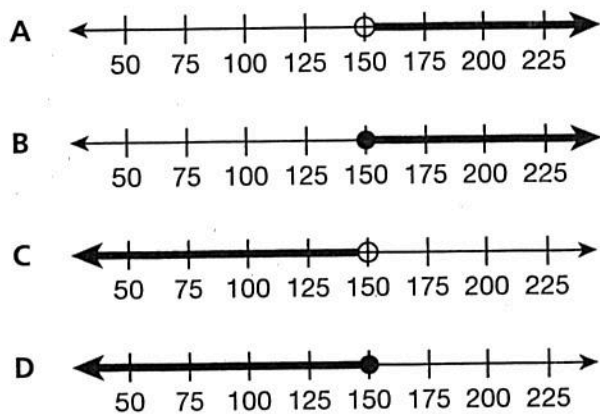
Which of the following statements does **not** describe the figures Sophia drew?

- A The ratio of all figures to squares is 12 to 5.
  - B The ratio of squares to circles is 5 to 3.
  - C The ratio of triangles to squares is 4 to 5.
  - D The ratio of circles to all figures is 3 to 9.
- 43 Rick has 22 comic books, which is more than Dana has. Dana has 5 more comic books than the number of comic books  $b$  that Stan has. Which statement compares the number of comic books Rick and Dana have?
- A  $22 > 5 + b$
  - B  $22 < 5 + b$
  - C  $22 > 5b$
  - D  $22 > 5 > b$

- 44 Which point is located at  $(3, -4)$ ?

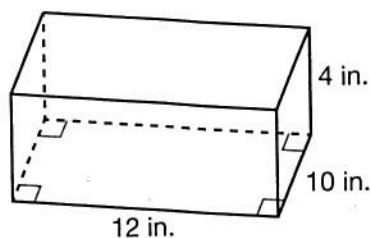


- A point A  
B point B  
C point C  
D point D
- 45 The balance of Tyrone's savings account is always more than \$150. Which number line represents the possible balance that Tyrone's savings account could have?





- 46 Tori built a wooden jewelry box and painted its entire outside red. The shape and size of the box are shown below. What is the area that Tori painted red?



[not drawn to scale]

- 47 Noor has 4 cups of hot chocolate in his thermos. He offers  $\frac{5}{8}$ -cup servings of hot chocolate to some friends. What is the **greatest** number of friends that Noor can offer hot chocolate to?
- A 4  
B 5  
C 6  
D 7

- 48** Jeffrey builds wooden decks for his clients' houses. His standard deck uses a fixed amount of lumber. The table below shows how much lumber Jeffrey needs to buy for different numbers of decks.

**LUMBER NEEDED**

Number of Decks	Lumber (in sq ft)
2	1,052
3	1,578
4	2,104
5	2,630
6	3,156

Based on the data in the table, how much lumber would Jeffrey need to buy to build 7 standard decks?

- A 3,682 square feet  
B 3,718 square feet  
C 4,208 square feet  
D 6,312 square feet
- 49** Which number makes the inequality true?  
 $4x < 4$
- A 9  
B 6  
C 4  
D 0
- 50** Which verbal expression represents the algebraic expression  $3y$ ?
- A 3 increased by  $y$   
B the product of 3 and  $y$   
C  $y$  to the third power  
D the quotient of 3 and  $y$

**51** Which expression is equivalent to  $-7x - 2 + 3x - 4$ ?

- A  $10x - 6$
- B  $-10x$
- C  $-4x - 6$
- D  $-7x - 3$

**52** A dolphin is swimming at an elevation of  $-20$  feet. On the shore, a parrot is sitting on a branch at an elevation of  $15$  feet. Which statement is true about the dolphin and the parrot?

- A The parrot is above sea level and the dolphin is below sea level.
- B The parrot is at sea level and the dolphin is below sea level.
- C Both the parrot and the dolphin are below sea level.
- D Both the parrot and the dolphin are above sea level.

**53** What is the value of  $a^2 + 2a$  when  $a = 3$ ?

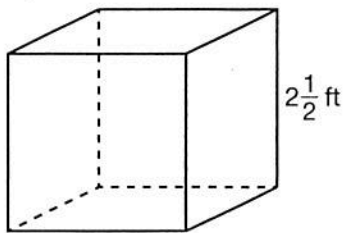
- A 15
- B 12
- C 11
- D 9

54 Which shows the statement below written as an algebraic equation and its solution?

Two-thirds of a number is 36.

- A  $\frac{2}{3}x = 36; x = 24$
- B  $\frac{2}{3} + x = 36; x = 35\frac{1}{3}$
- C  $\frac{2}{3} + x = 36; x = 36\frac{2}{3}$
- D  $\frac{2}{3}x = 36; x = 54$

55 What is the volume of the cube shown below?



[not drawn to scale]

- A  $6\frac{1}{4}$  cubic feet
- B  $7\frac{1}{2}$  cubic feet
- C  $8\frac{1}{8}$  cubic feet
- D  $15\frac{5}{8}$  cubic feet

**56**

Jessica is buying fabric to make a dress. She buys 3 yards of blue fabric for \$8.94 at Fashion Express. At that rate, how much would it cost Jessica to buy 5 yards of the fabric?

*Show your work.*

Answer \$ \_\_\_\_\_

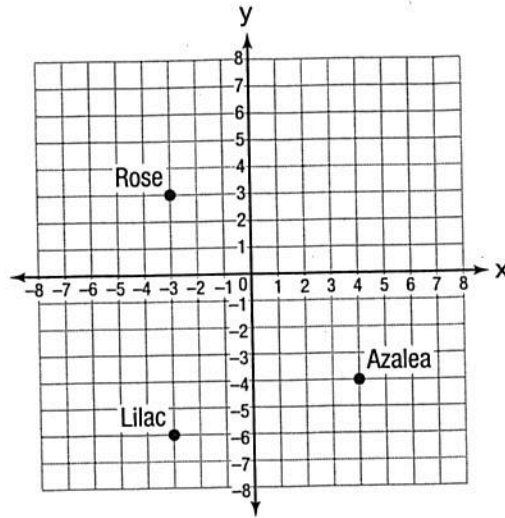
**PRACTICE TEST 2**

**Go On**

57

A landscape designer is using the map below to plan a client's backyard.

**CLIENT'S BACKYARD**



The hydrangea plant will be located at (4, 6). Plot and label this point on the map.

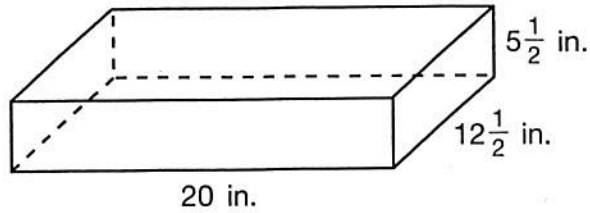
The length of each square on the map represents one foot in the garden. How far apart has the designer placed the hydrangea and azalea plants?

Answer \_\_\_\_\_ feet



58

A department store has gift boxes that are 20 inches long,  $12\frac{1}{2}$  inches wide, and  $5\frac{1}{2}$  inches high.



[not drawn to scale]

What is the volume, in cubic inches, of one gift box?

*Show your work.*

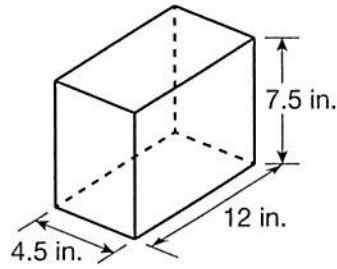
*Answer* \_\_\_\_\_ cubic inches

The store also offers a smaller gift box, which has a volume that is 80% of the box shown above. What is the volume of the smaller gift box?

*Show your work.*

*Answer* \_\_\_\_\_ cubic inches

- 59 Malik is designing a box that he will make in a woodworking class. He drew the design shown below.



[not drawn to scale]

Draw a net of Malik's design. Include the dimensions on your net.

What is the surface area of Malik's box? Record your answer as a decimal rounded to the tenths place.

*Show your work.*

*Answer* \_\_\_\_\_ square inches

- 60** Josie needs to buy notebooks for school. Each notebook costs \$1.25. Write and solve an equation to solve for how many notebooks Josie can buy for \$10.

*Show your work.*

*Answer* \_\_\_\_\_ notebooks

**61** The average temperature, in Alaska, for the month of January is  $-9^{\circ}\text{F}$ . In the month of February, it is  $-16^{\circ}\text{F}$ .

Which month has the colder average temperature? On the lines below, provide your answer and explanation of your reasoning.

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The average temperature in March is  $2^{\circ}\text{F}$ . Use the number line below to organize all three temperatures. Label zero and each month appropriately.



- 62** The tables below show prices at Fabulous Fabrics for different lengths of two types of fabric that Gina is considering for a sewing project.

Complete the tables.

**BATIK**

Cost (in \$)		45	99	
Length (in yards)	2	5	11	12

**LINEN**

Cost (in \$)	24			96
Length (in yards)	3	6	8	12

Use the information given in the tables to determine which fabric is more expensive.

*Show your work.*

*Answer* \_\_\_\_\_

Gina can spend a maximum of \$150 for fabric for her project. She can only use one fabric. She wants to use the fabric that will allow her to buy the greatest amount she can for her money. Which type of fabric should she use, and how many yards can she buy (rounded to the hundredth)?

*Show your work.*

*Answer* \_\_\_\_\_ yards of \_\_\_\_\_

**Go On**

- 63** Manuel is making cookies for the holidays. Each batch of cookies he will make requires  $\frac{3}{4}$  cup of sugar. He has a total of  $2\frac{5}{8}$  cups of sugar. Write an inequality that can be used to find  $b$ , the number of batches of cookies Manuel can make.

*Answer* \_\_\_\_\_

At most, how many batches of cookies can he make?

*Show your work.*

*Answer* \_\_\_\_\_ batches



**64**

While on vacation, Ernesto travelled from the US to Europe. When he got there, he converted his American dollars in euros (the currency of most European countries). He gave the bank teller \$850 and was given back €630. At the end of his vacation, Ernesto has €150 to convert back into dollars. How much money (in US dollars) did Ernesto have when he got home?

*Show your work.*

Answer \$ \_\_\_\_\_

**PRACTICE TEST 2**

**Go On**

- 65 The ABC Bagel Shop sells bagels for \$0.85 each. Thus far today they have sold 47 bagels. Write an equation that represents the amount of money,  $A$ , they'll make if they sell an additional,  $b$ , bagels today.

*Answer* \_\_\_\_\_

Use the equation you wrote to determine how much money they'll make if they sell an additional 122 bagels.

*Show your work.*

*Answer* \$ \_\_\_\_\_

**STOP**

# Reference Sheet

## Grade 6 Mathematics Reference Sheet

### CONVERSIONS

1 inch = 2.54 centimeters  
1 meter = 39.37 inches  
1 mile = 5,280 feet  
1 mile = 1,760 yards  
1 mile = 1.609 kilometers

1 kilometer = 0.62 mile  
1 pound = 16 ounces  
1 pound = 0.454 kilogram  
1 kilogram = 2.2 pounds  
1 ton = 2,000 pounds

1 cup = 8 fluid ounces  
1 pint = 2 cups  
1 quart = 2 pints  
1 gallon = 4 quarts  
1 gallon = 3.785 liters  
1 liter = 0.264 gallon  
1 liter = 1,000 cubic centimeters

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### FORMULAS

Triangle

$$A = \frac{1}{2}bh$$

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Right Rectangular Prism

$$V = Bh \text{ or } V = lwh$$

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