



Ready™ New York CCLS Practice

6

Mathematics



To the Student

Ready New York CCLS Practice is a review program for the Common Core Learning Standards for Mathematics. This book has three practice tests. In each practice test, you will answer 69 Math questions (60 multiple-choice, 5 short-response, and 4 extended-response).

Your teacher will explain how you will do the practice tests and record your answers. Be sure to follow the directions for each practice test. As you complete the practice tests, answer the questions carefully. Use the Answer Forms beginning on page 105 to record your answers to the multiple-choice questions. Remember to fill in the answer bubbles completely. If you change an answer, you must erase your first answer fully. You will write out your answers to the short- and extended-response questions in the book.

While you work on the practice tests, use the Testing Tips below. Read these helpful tips carefully. They can make you a better test taker.

Testing Tips for Answering Multiple-Choice Questions

- Read each question carefully before you try to answer it.
- Be sure you know what the question is asking you to do.
- Cross out any answer choices that are not reasonable. Then make your choice from the remaining choices.
- Read the question again. Check that your answer makes sense.

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15 14 13 12 11 10 9 8 7 6 5 4 3 2

Answer items 1 through 30.

- 1** Maria is making blueberry muffins using a blueberry cake recipe. To make the muffins, she has to divide the cake recipe in half. If the cake recipe calls for $\frac{2}{3}$ cup of milk, which expression can Maria use to calculate how much milk she needs to make the muffins?

A $\frac{1}{2} \div \frac{2}{3}$

B $\frac{2}{3} \times 2$

C $\frac{2}{3} \times \frac{1}{2}$

D $2 \div \frac{2}{3}$

- 2** Luke jogged a total of 56.5 miles last week. If Luke jogged the same distance, d , each day for 3 days and half that distance on each of the remaining days, which algebraic equation can he use to determine how many miles he jogged each day?

A $3d + 4 \times \frac{1}{2}d = 56.5$

B $7 + 56.5 = d + \left(\frac{1}{2}d\right)$

C $3 + d + 4 + \left(\frac{1}{2}d\right) = 56.5$

D $3 \times (56.5) + 4 \times 28.25 = d$

- 3** Sarah sells beaded necklaces. She makes a profit of \$4 on every necklace she sells. Which table represents the profit she makes?

PROFIT

A

Number of Necklaces Sold	Profit (\$)
4	16
6	24
8	32
10	40

PROFIT

B

Number of Necklaces Sold	Profit (\$)
4	8
6	10
8	12
10	14

PROFIT

C

Number of Necklaces Sold	Profit (\$)
4	4
6	8
8	12
10	16

PROFIT

D

Number of Necklaces Sold	Profit (\$)
4	16
6	20
8	24
10	28

4

The rules for two numerical patterns are given below.

Pattern A: Start with 0, and add 2 to each term

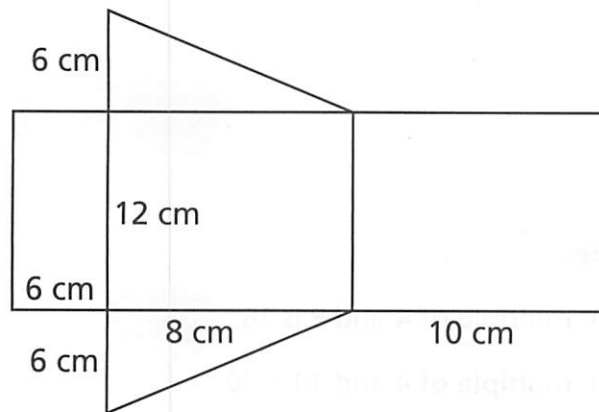
Pattern B: Start with 0, and add 4 to each term

The corresponding terms of the two patterns form ordered pairs, with the x -coordinates coming from Pattern A, and the y -coordinates coming from Pattern B. What are the first 3 ordered pairs?

- A (0, 0), (2, 2), (4, 4)
- B (0, 4), (4, 8), (8, 12)
- C (0, 2), (2, 4), (4, 6)
- D (0, 0), (2, 4), (4, 8)

5

Use the net shown below.



[not drawn to scale]

What is the surface area of the triangular prism?

- A 288 cm^2
- B 312 cm^2
- C 336 cm^2
- D 368 cm^2

Go On

- 6** Square $QRST$ has vertices $Q(2, 8)$, $R(-4, 8)$, $S(-4, 2)$, and $T(2, 2)$ and triangle QTU has vertices $Q(2, 8)$, $T(2, 2)$ and $U(6, 2)$.

What is the area of the quadrilateral formed by the square and triangle?

- A** 60 square units
- B** 48 square units
- C** 36 square units
- D** 12 square units

- 7** In New York City, it rained 3.6 inches in July and 4.7 inches in August. What was the total rainfall for both months?

- A** 8.3
- B** 8.13
- C** 7.3
- D** 7.13

- 8** Which statement is *true*?

- A** The least common multiple of 4 and 8 is 16.
- B** The least common multiple of 4 and 10 is 40.
- C** The least common multiple of 6 and 10 is 30.
- D** The least common multiple of 6 and 8 is 48.

- 9** Jimi is n years old. Carly is 4 years older than Jimi. Which expression represents Carly's age?

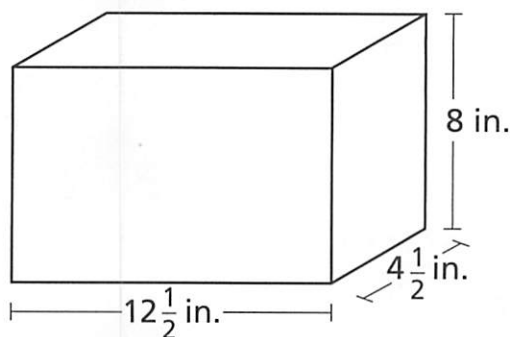
- A** $2n + 4$
- B** $n + 4$
- C** $n - 4$
- D** $4n$

10 Which expression is equivalent to $4 - 8x$?

- A $4(1 - 8x)$
- B $2(2 - 4x)$
- C $4(4 - 2x)$
- D $2(1 - 4x)$

11 What is the volume, in cubic inches, of the right rectangular prism shown below? Use the following formula.

$$V = l \times w \times h$$



[not drawn to scale]

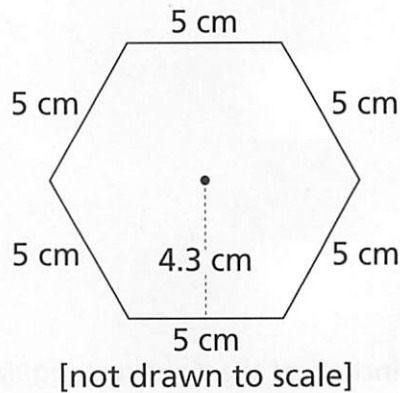
- A 25 cubic inches
- B $120\frac{1}{2}$ cubic inches
- C $384\frac{1}{2}$ cubic inches
- D 450 cubic inches

12 A stock's value changed by -15.75 from the previous day. Which statement describes the difference in the stock's value?

- A The value is \$15.75 less because $|-15.75| = 15.75$
- B The value is \$15.75 more because $|-15.75| = 15.75$
- C The value is \$15 less because $|-15.75| = 15$
- D The value is \$15 more because $|-15.75| = 15$

Go On

- 13** Consider the regular hexagon shown below.



What is the area of the hexagon?

- A 64.5 cm²
- B 30 cm²
- C 21.5 cm²
- D 10.75 cm²

- 14** The product of two factors is $18x + 45$. What are the factors?

- A $9(5x + 2)$
- B $9(2x + 5)$
- C $3(2x + 15)$
- D $3(6x - 5)$

- 15** A can of tomato soup has a net weight of 8 ounces of soup. How many grams are in the can of soup?

1 ounce = 28.35 grams.

- A 164.4 g
- B 224.8 g
- C 226.8 g
- D 283.5 g

16

Four students were asked to locate the point (5, 3) on the coordinate grid. Each student started at the origin and located the point as listed below:

- **Jack:** Moved left 5 units and up 3 units.
- **Martin:** Moved left 3 units and up 5 units.
- **Molly:** Moved right 3 units and up 5 units.
- **Edwina:** Moved right 5 units and up 3 units.

Which student located the point (5, 3) correctly?

- A** Jack
- B** Martin
- C** Molly
- D** Edwina

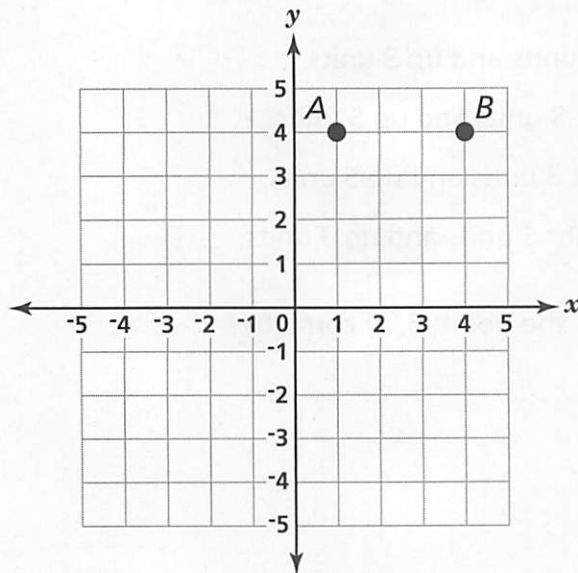
17

Sam needs at least 78 credits to get his college degree. At the end of his third year, Sam has a total of 52 credits. Which inequality represents the number of credits, C , Sam needs to get his degree?

- A** $C \leq 26$
- B** $C \leq 78$
- C** $C \geq 26$
- D** $C \geq 52$

18

What is the distance between points A and B on the coordinate grid below?



- A 2 units
- B 3 units
- C 4 units
- D 5 units

19

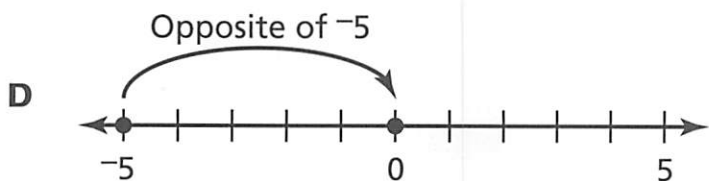
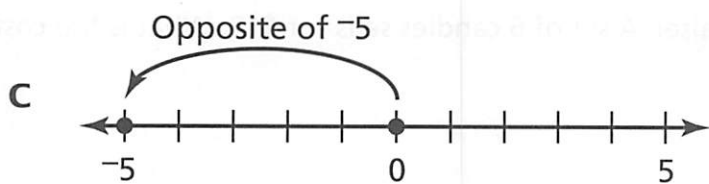
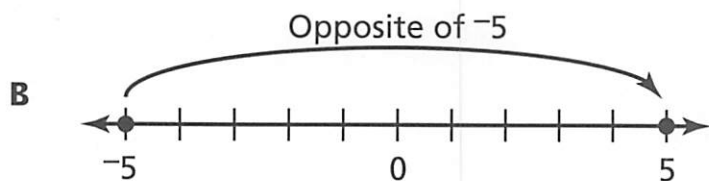
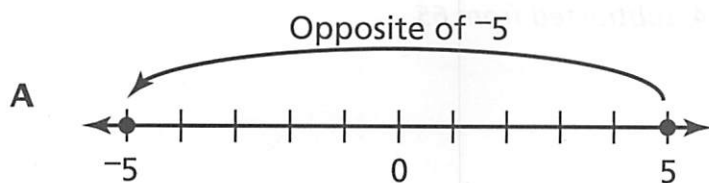
A shipping container, in the shape of a rectangular prism, fits in a space that has a volume of 2,212 cubic meters. If the container is 7 meters wide and 8 meters tall, how long is the container? Use the following formula.

$$V = l \times w \times h$$

- A $39\frac{1}{2}$ meters
- B 70 meters
- C $80\frac{1}{2}$ meters
- D 39 meters

20Which statement is *true* about the expression $7(2x + 5)$?

- A The expression has two factors.
- B The expression has three factors.
- C The factor $(2x + 5)$ has three terms.
- D The expression is the sum of three terms.

21Which number line represents the opposite of -5 ?**Go On**

22 Which expression represents the expression 7^4 ?

- A $4 + 7$
- B 4×7
- C $7 + 4 + 7 + 4 + 7 + 4 + 7 + 4$
- D $7 \times 7 \times 7 \times 7$

23 Which expression *best* represents the statement?

A number multiplied by 4, subtracted from 65.

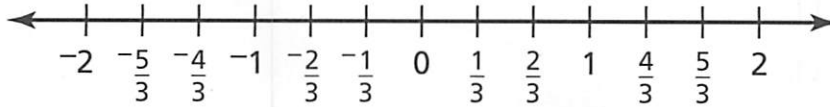
- A $4(65 - x)$
- B $4x - 65$
- C $65 - 4x$
- D $4(x - 65)$

24 A local club sells candles as a fundraiser. A set of 6 candles sells for \$18. What is the cost of one candle?

- A \$3
- B \$4
- C \$6
- D \$8

25

Refer to the number line below.

Which statement is *true*?

- A Since -2 is to the left of 1 , $-2 < 1$.
- B Since -1 is to the left of 1 , $-1 = 1$.
- C Since -2 is to the left of $\frac{1}{3}$, $-2 > \frac{1}{3}$.
- D Since -2 is to the left of -1 , $-1 < -2$.

26

In hockey, a player is assigned a $+3$ rating if his team scores 3 more goals than the opponent during the player's time on the ice. A hockey player is assigned a -1 rating if his team scored 1 fewer goal than the opposing team during the player's time on the ice. Which phrase *best* describes the events that would result in a player being assigned a rating of 0?

- A The player's team scored no goals while the player was on the ice.
- B The opponent scored no goals while the player was on the ice.
- C The player's team scored one more goal than the opponent while the player was on the ice.
- D The player's team and the opponent scored the same number of goals while the player was on the ice.

Go On

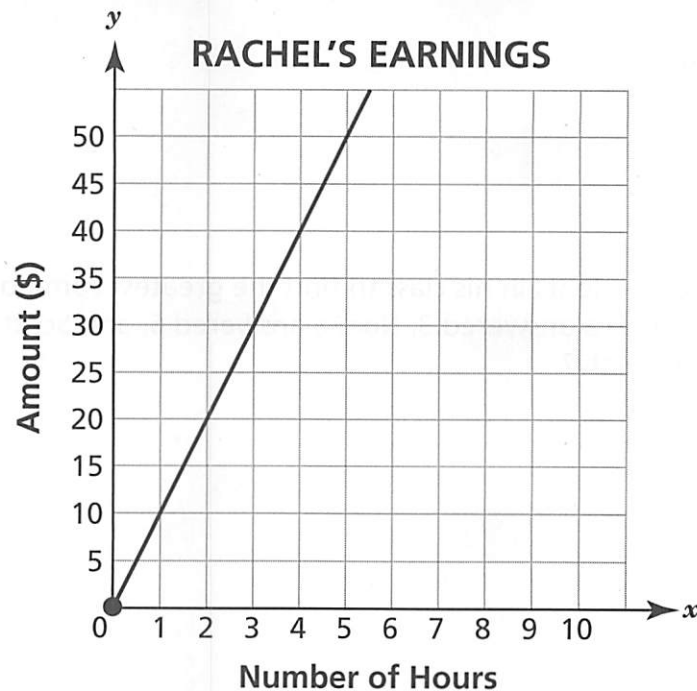
27 In which quadrant does the point $(-2, 5)$ lie?

- A** Quadrant I
- B** Quadrant II
- C** Quadrant III
- D** Quadrant IV

28 What is the product of 14.5 and 20.2?

- A** 192.9
- B** 219.0
- C** 292.9
- D** 319.0

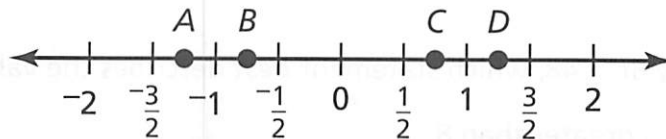
Rachel works part time at a clothing store. The graph below shows her earnings.



Which equation is used to determine the relationship between the number of hours Rachel worked, x , and her earnings, y ?

- A $y = 10x$
- B $y = 20x$
- C $y = x + 10$
- D $y = x + 20$

Which point on the number line represents $-\frac{6}{8}$?



- A point A
- B point B
- C point C
- D point D

STOP

Practice Test 1: Book 2

Answer items 31 through 60.

31 Mr. Fraser asked four students in his class to find the greatest common factor of 24 and 36. Donte answered 2, Annika answered 3, Noelia answered 6, and Scott answered 12. Which student answered correctly?

- A Donte
- B Annika
- C Noelia
- D Scott

32 Simplify.

$$14^2 - (5 - 3)^2 + (6 - 2)^2$$

- A 184
- B 194
- C 208
- D 216

33 Given the inequality $6t > 48$, which statement *best* describes the value of t ?

- A The value of t is greater than 8.
- B The value of t is less than 8.
- C The value of t is equal to 8.
- D The value of t is 8 or less.

34

The formula below is used to convert a temperature in degrees Fahrenheit to a temperature in degrees Celsius.

$$^{\circ}\text{C} = \frac{5}{9} (^{\circ}\text{F} - 32)$$

What is the temperature in degrees Celsius for a temperature of 40°F ?

- A $-9\frac{7}{9}^{\circ}\text{C}$
- B $1\frac{4}{9}^{\circ}\text{C}$
- C $4\frac{4}{9}^{\circ}\text{C}$
- D $22\frac{2}{9}^{\circ}\text{C}$

35

In an art class, 40% of the students used watercolors for painting. Ten students in the art class used watercolors. How many students were there in the class?

- A 30
- B 25
- C 20
- D 15

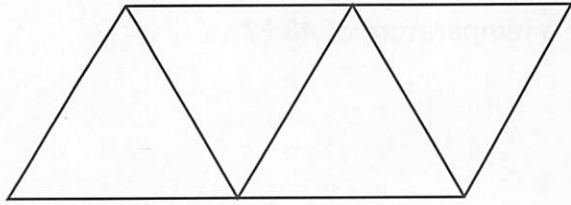
36

Andrew had \$250 in his savings account. He deposited the same amount of money for each of the next 6 weeks. For the next 4 weeks, he deposited twice the amount of money as the previous 6 weeks. If d is the amount of money Andrew deposited each week, which expression represents how much money he will have in his account after the tenth week?

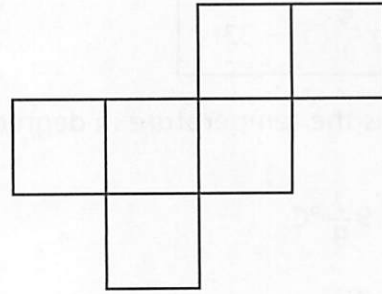
- A $250 + d + 4(2d)$
- B $250 - d + 4(2d)$
- C $250 + 6d + 4(2d)$
- D $250 - 6d + 4(2d)$

Go On

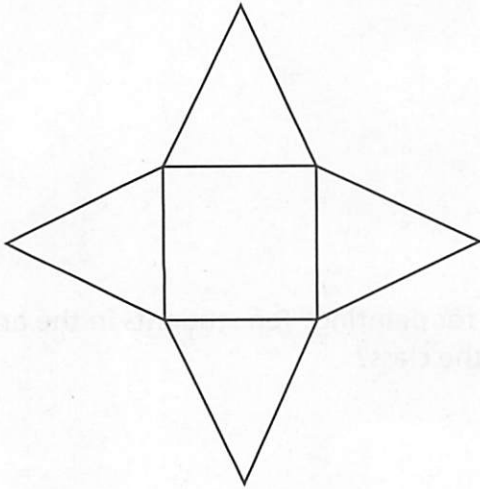
Which net will form a triangular prism when folded?



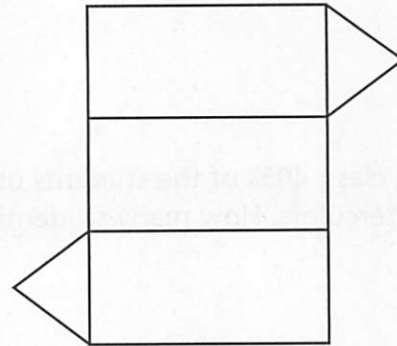
A



C



B



D

38

Four friends wrote the sum of 24 and 40 using a common factor and the distributive property.

Name	Expression
Chet	$8(4 + 5)$
Mila	$4(6 + 8)$
Lara	$4(6 + 9)$
Ryder	$8(3 + 5)$

Who wrote the expression that uses both the greatest common factor of 24 and 40 and gives the sum of 24 and 40?

- A Chet
- B Mila
- C Lara
- D Ryder

39

Paola burns 30 calories walking 10 minutes. At this rate, how many calories will she burn in 15 minutes?

- A 15 calories
- B 35 calories
- C 40 calories
- D 45 calories

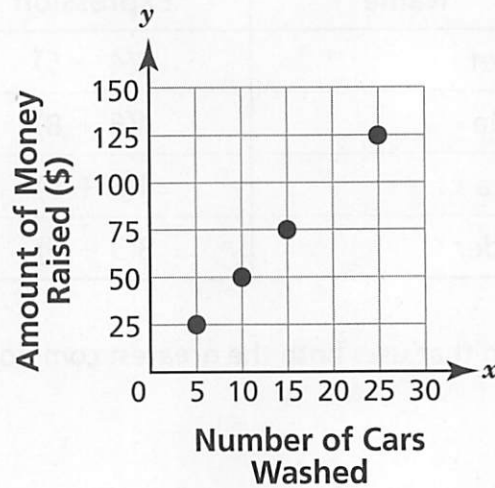
40

Which expression is equivalent to $a + a + a + b + b + b$?

- A $3a + b$
- B $a + 3b$
- C $3a + 3b$
- D $3 + ab$

Go On

The football team decided to hold a car wash as a fundraiser. They made this graph to see how much money they would raise from washing cars.



Which table models the data in the graph?

Number of Cars Washed	Amount of Money Raised
5	25
10	50
15	75
25	125
30	150

A

Number of Cars Washed	Amount of Money Raised
5	25
10	50
15	75
25	125
30	175

C

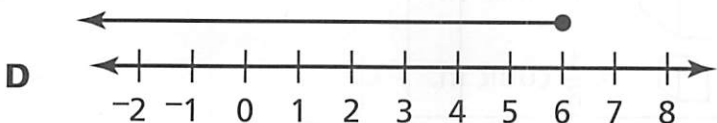
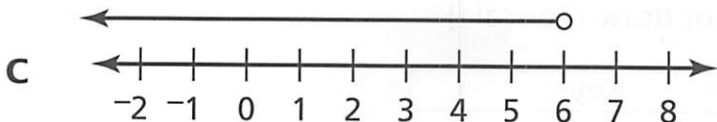
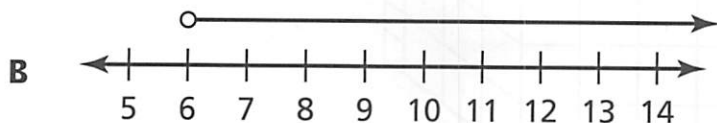
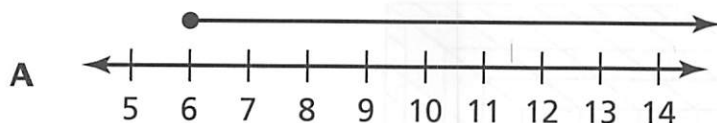
Number of Cars Washed	Amount of Money Raised
25	5
50	10
75	15
125	25
150	30

B

Number of Cars Washed	Amount of Money Raised
25	5
50	10
75	15
125	25
175	30

D

42

Which number line represents the solution to the inequality $x \geq 6$?

43

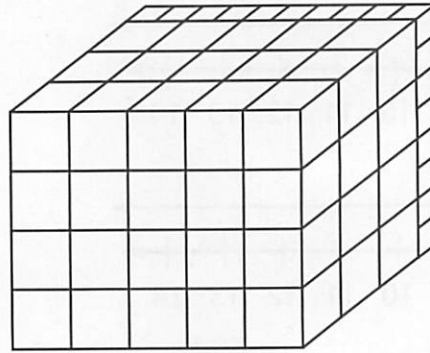
The table below lists places around the world that have land areas below sea level. If 0 is sea level, which place is closest to sea level?

Country	Elevation
Death Valley, United States	-86 meters
Lake Eyre, Australia	-16 meters
Lago Enriquillo, Dominican Republic	-46 meters
Laguna Salada, Mexico	-10 meters

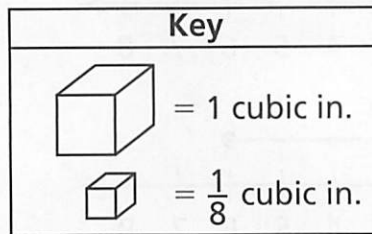
- A Death Valley
- B Lake Eyre
- C Lago Enriquillo
- D Laguna Salada

Go On

A rectangular prism is shown below.



[not drawn to scale]



What is the volume of the prism? Use the following formula.

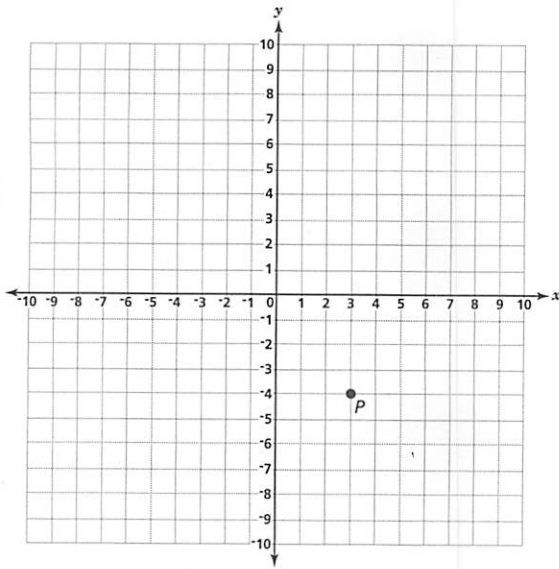
$$V = l \times w \times h$$

- A 60 cubic inches
- B 70 cubic inches
- C 80 cubic inches
- D 90 cubic inches

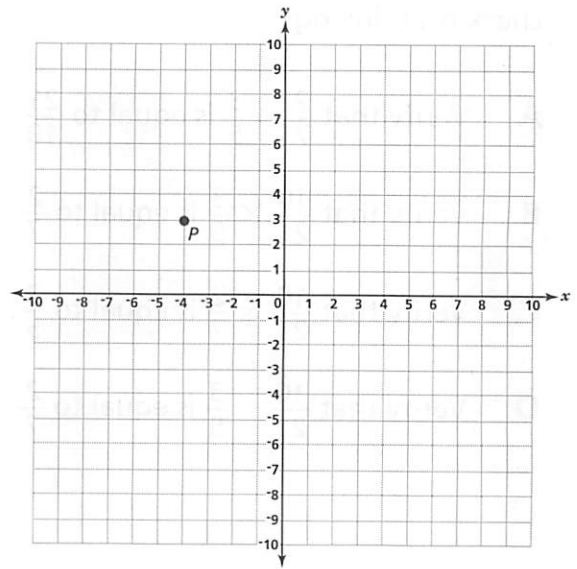
Which expression has 4 and $(7x + 5)$ as factors?

- A $7x + 9$
- B $11x + 9$
- C $28x + 5$
- D $28x + 20$

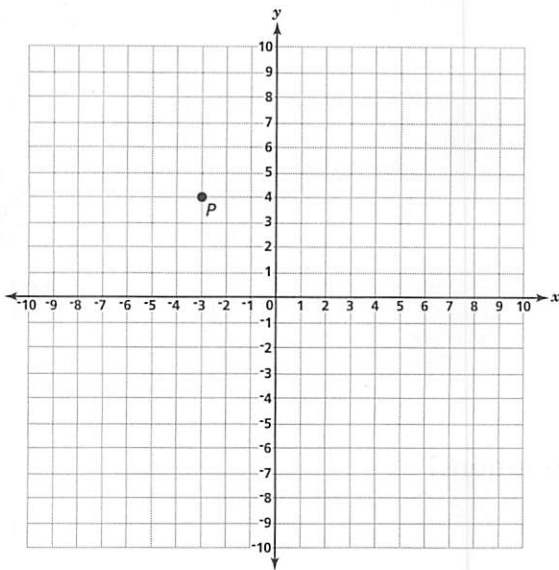
Which graph shows point P with coordinates $(3, -4)$?



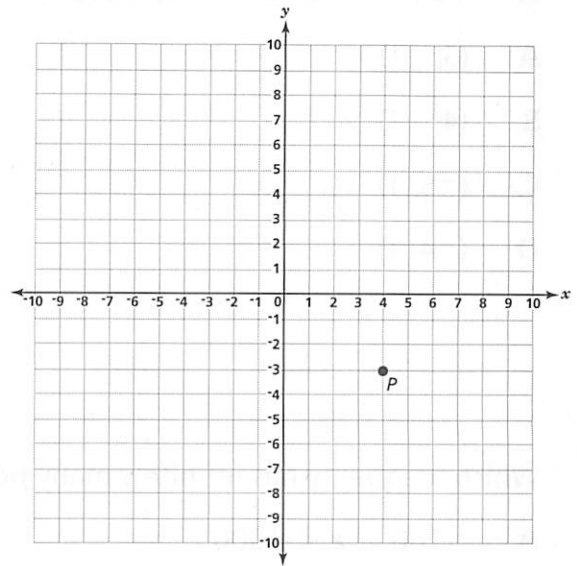
A



B



C



D

47 Jamaal thinks the equation $\frac{2}{7} \div \frac{3}{5} = \frac{10}{21}$ is true. Which of the following can Jamaal use to check his thinking?

- A** Verify that $\frac{2}{7} \times \frac{3}{5}$ is equal to $\frac{21}{10}$.
- B** Verify that $\frac{10}{21} \times \frac{3}{5}$ is equal to $\frac{2}{7}$.
- C** Verify that $\frac{10}{21} \times \frac{2}{7}$ is equal to $\frac{3}{5}$.
- D** Verify that $\frac{10}{21} \div \frac{3}{5}$ is equal to $\frac{2}{7}$.

48 Two vertices of a right triangle are (0,1) and (0,6). The area of the triangle is 10 square units. Which point, in Quadrant II, is the third vertex of the triangle?

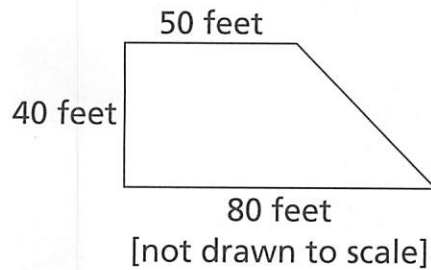
- A** (5, -1)
- B** (4, -1)
- C** (-5, 1)
- D** (-4, 1)

49 Which inequality has infinitely many *positive* solutions?

- A** $-100 \leq x < 1000$
- B** $-4 < x < 12$
- C** $x \leq 5$
- D** $x > 10$

50

Arthur's farm is in the shape shown below.



What is the area of the farm?

- A 120 ft²
- B 2,000 ft²
- C 2,600 ft²
- D 3,200 ft²

51

In Josie's garden, the ratio of zinnias to petunias is 5:3. Which sentence describes the ratio?

- A For every 5 zinnias, there are 3 petunias.
- B For every 3 zinnias, there are 5 petunias.
- C For every 8 flowers, there are 5 zinnias.
- D For every 3 petunias, there are 8 flowers.

52

What is the sum of 58.3 and 12.08?

- A 6.038
- B 60.38
- C 70.38
- D 703.8

Go On

53 What is the constant term in the expression $x^2 - 2x + 7y + 8$?

- A -2
- B 1
- C 7
- D 8

54 In golf, 0 represents a score of par, and a player's score describes how far it is from par. In the table below, which golfer is the most above par?

Golfer	Score
Cortez	-3
Langley	0
Hopkins	4
Chin	-5

- A Cortez
- B Langley
- C Hopkins
- D Chin

55 What is the opposite of $-6\frac{3}{4}$?

- A $-6\frac{4}{3}$
- B $-\frac{4}{27}$
- C 0
- D $6\frac{3}{4}$

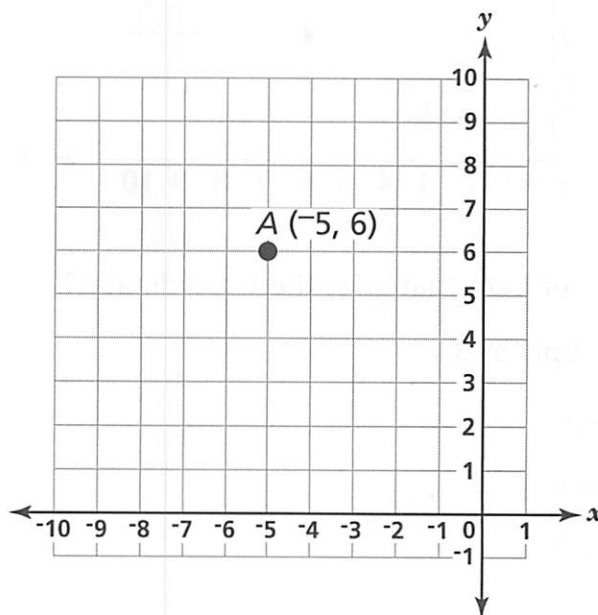
56

What is 1,476 divided by 12?

- A 113
- B 123
- C 124
- D 134

57

Use the grid below.

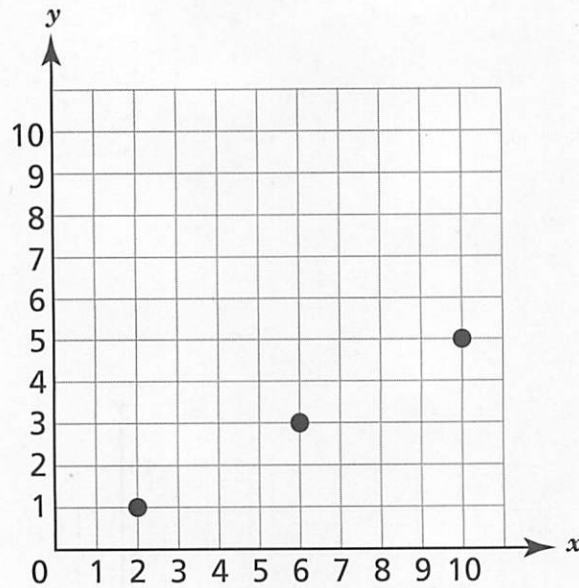


Which ordered pair represents point A reflected across the y-axis?

- A (-6, -5)
- B (-5, -6)
- C (5, 6)
- D (6, 5)

Go On

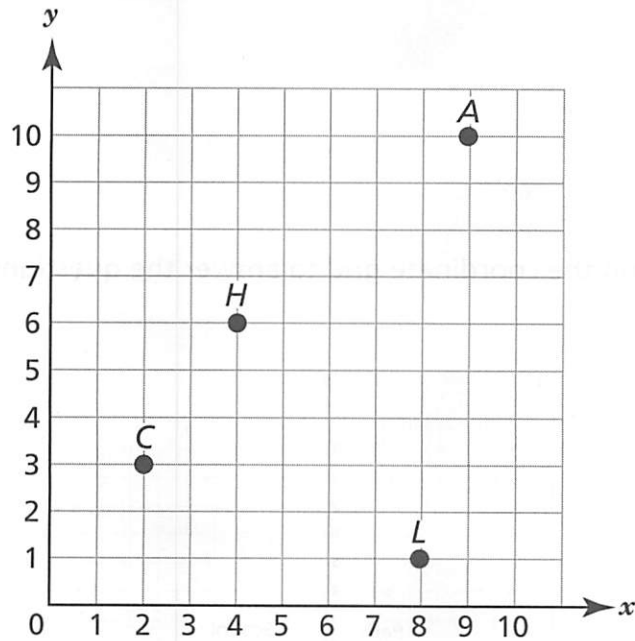
- 58** The points on the coordinate plane below show two different number patterns. The first pattern gives the x -coordinates of the points. The second pattern gives the y -coordinates of the points.



What is the rule for the pattern that gives the x -coordinates?

- A** Start at 2 and multiply by 3
 - B** Start at 2 and add 4
 - C** Start at 1 and add 2
 - D** Start at 0 and add 2
- 59** Lucien drove 83.25 miles to his brother's house. He used 3.7 gallons of gas. What is the average number of miles Lucien can drive using one gallon of gas?
- A** 2.25
 - B** 22.5
 - C** 25.2
 - D** 225

The coordinate plane below has 4 points plotted on it.



How much *greater* is the y-coordinate for Point A than the y-coordinate for Point L?

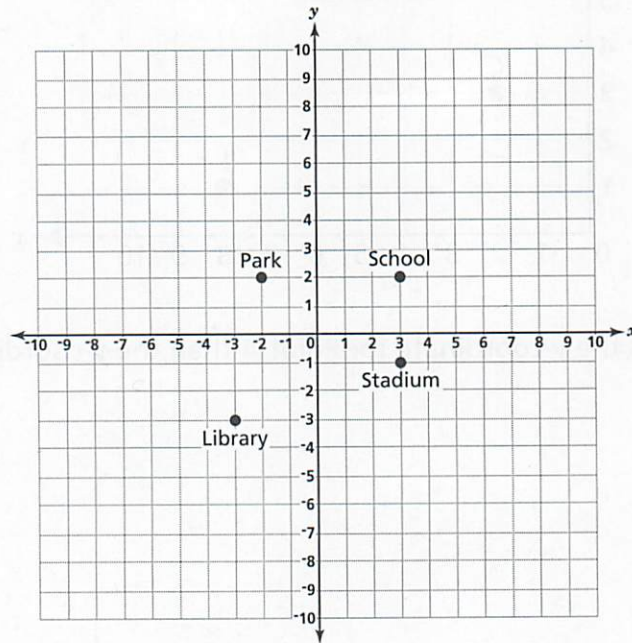
- A 9
- B 7
- C 4
- D 1

STOP

Practice Test 1: Book 3

Answer items 61 through 69.

- 61** Use the map shown on the coordinate grid to answer the questions below. Each unit represents 1 block.



Part A

Which place is located at the point $(-3, -3)$?

Answer _____

Part B

On Saturday, the school band marched from the school to the stadium. After the game, the band marched back to the school. How many blocks did the band march on Saturday?

Answer _____

- 62** A rental hall charges a fee of \$450 to rent the hall plus \$15 per guest. The total cost, c , of renting the hall for a party for g guests is given by the formula $c = 450 + 15g$.

Part A

How much will the hall cost for a party of 50 guests?

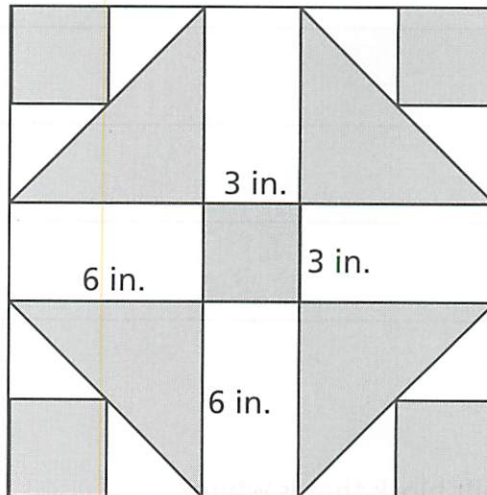
Answer _____

Part B

Alex paid \$1,575 to rent the hall. How many guests did he have at his party?

Answer _____

- 63** Carolyn is making a quilt using quilt blocks like the one shown below. All the shaded squares are the same and all the shaded triangles are the same.



Part A

What is the area of the shaded squares combined?

Show your work.

Answer _____ square inches

Part B

Explain one way to find the area of the shaded triangles combined without using the formula

$$A = \frac{1}{2} \times b \times h.$$

Part C

What is the area of the quilt block that is white?

Show your work.

Answer _____ square inches

64 Ryan bought $2\frac{1}{4}$ pounds of almonds and divided them into bags with $\frac{1}{8}$ pound in each bag.

Part A

Write an equation to represent the number bags, b , he can fill.

Answer _____

Part B

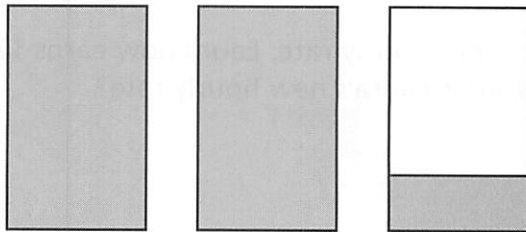
Solve the equation to find the number of bags.

Show your work.

Answer _____ bags

Part C

The model below represents the $2\frac{1}{4}$ pounds of almonds. Use the model to show your answer visually.



65 Laura works 20 hours a week. She earns \$265 a week, which includes a \$15 weekly bonus.

Part A

Write an equation to find how much Laura earns per hour. Use h to represent the hourly rate.

Equation _____

Part B

Solve the equation to find her hourly rate.

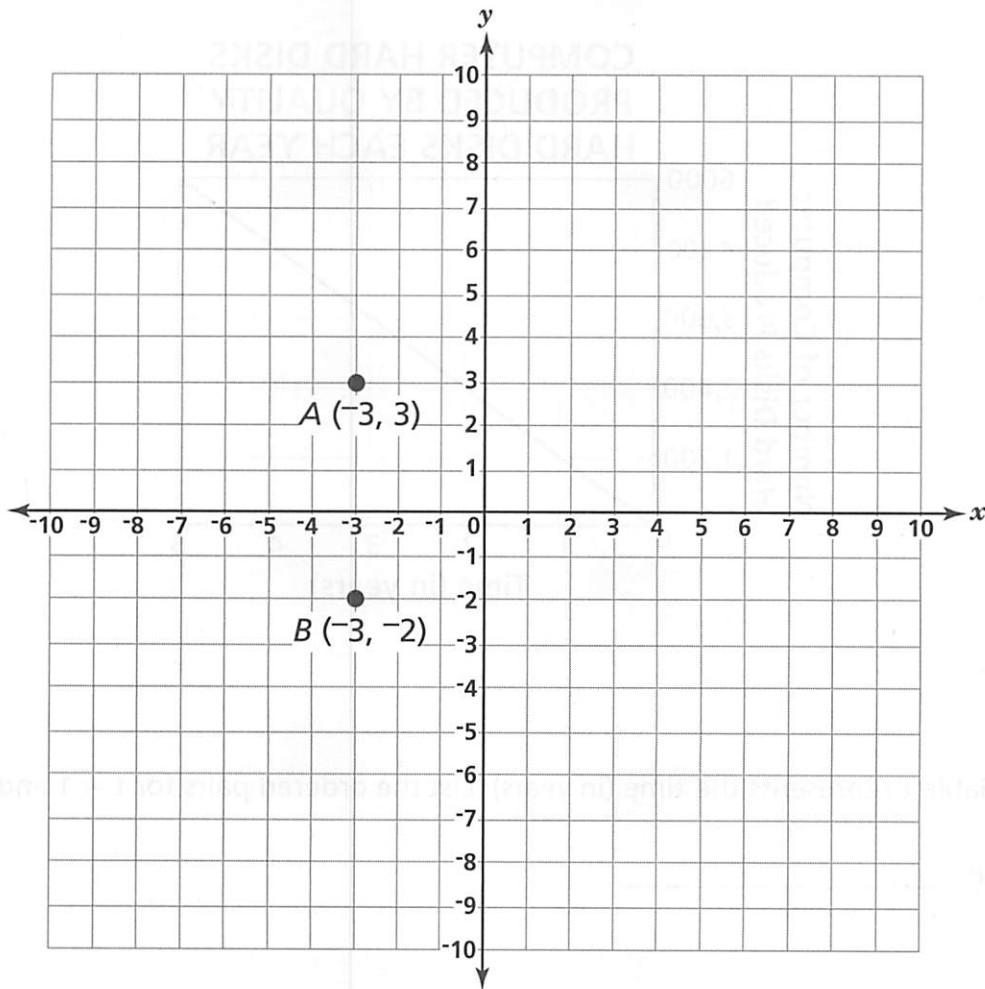
Answer _____

Part C

After getting a raise in her hourly rate, Laura now earns \$275 each week. This still includes the \$15 weekly bonus. What is Laura's new hourly rate?

Answer _____

The points A and B on the coordinate plane shown below are two vertices of square $ABCD$.



Part A

Find the coordinates of the vertices C and D .

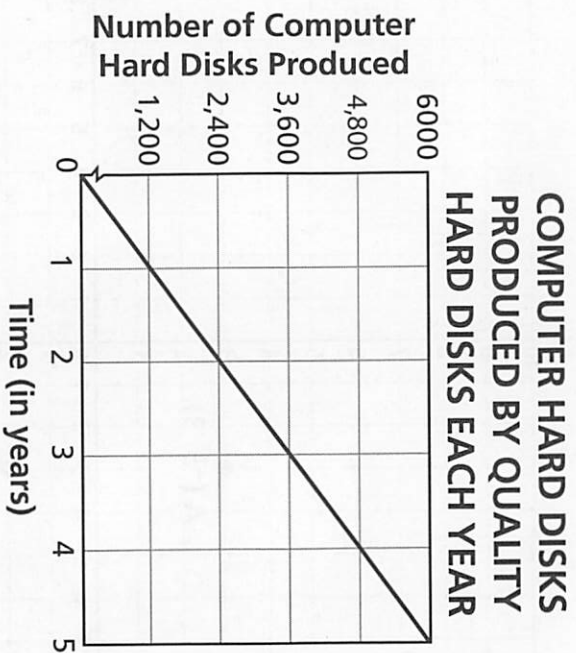
Answer _____

Part B

What is the area of the square?

Answer _____

The graph represents the last 5 years of computer hard-drive production for Quality Hard Disks.



Part A

The variable t represents the time (in years). List the ordered pairs for $t = 1$ and $t = 2$.

Answer _____

Part B

Write an equation to demonstrate the relationship between the time, t , and the number of hard disks produced, p .

Answer _____

68

Olivia is 4 feet 10 inches tall. She compared her height with her younger sister, Susan, and found that Susan is 15 inches shorter than her.

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

Part A

What is Olivia's height in inches?

Answer _____

Part B

Express her younger sister's height in centimeters.

$$1 \text{ inch} = 2.54 \text{ cm}$$

Show your work.

Answer _____

69 Consider the inequality $x + 8 > 13$.

Part A

Use substitution to determine which number in the set $\{-4, -6, 3, 7\}$ makes the inequality true.

Show your work.

Answer _____

Part B

Solve the inequality.

Show your work.

Answer _____

Part C

Explain why $x = 5$ is not a solution to the inequality.

STOP

Answer items 1 through 30.

- 1 An art student is mixing blue paint with yellow paint to create a custom color. The table below shows the amount of blue and yellow paint that is mixed together.

PAINT

Blue Paint (gallon)	Yellow Paint (gallon)
6	4
12	8
18	12

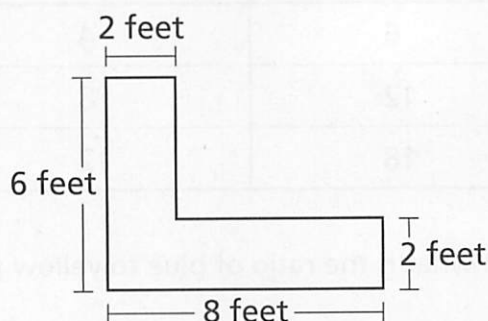
Based on this information what is the ratio of blue to yellow paint?

- A 3:2
 - B 2:3
 - C 1:2
 - D 2:1
- 2 Coming into the final stretch, Hilary's time in the mile run was -2.8 seconds compared to the school record pace. How many seconds faster is her time than the school record?
- A 1.4
 - B 2
 - C 2.8
 - D 28

- 3** Jason has a collection of 12 model planes. His father added to the collection and Jason now has 32 model planes. Which equation can be solved to find the number of model planes, p , Jason's father gave him?

- A** $12 = 32 + p$
- B** $32 = 12 + p$
- C** $32 = 12p$
- D** $44 = 12 + p$

- 4** The students in a shop class at a middle school are building a giant wooden L for their school. The figure is shown below.



What is the area of the wooden L?

- 5** As a fundraiser, the swim team is taking pledges to swim a certain number of lengths of the pool. Gerri wants to swim 125 lengths. If she has completed n lengths, which expression can be used to find how many more lengths Gerri has to swim?

- A** $n - 125$
- B** $125 - n$
- C** $n + 125$
- D** $125n$

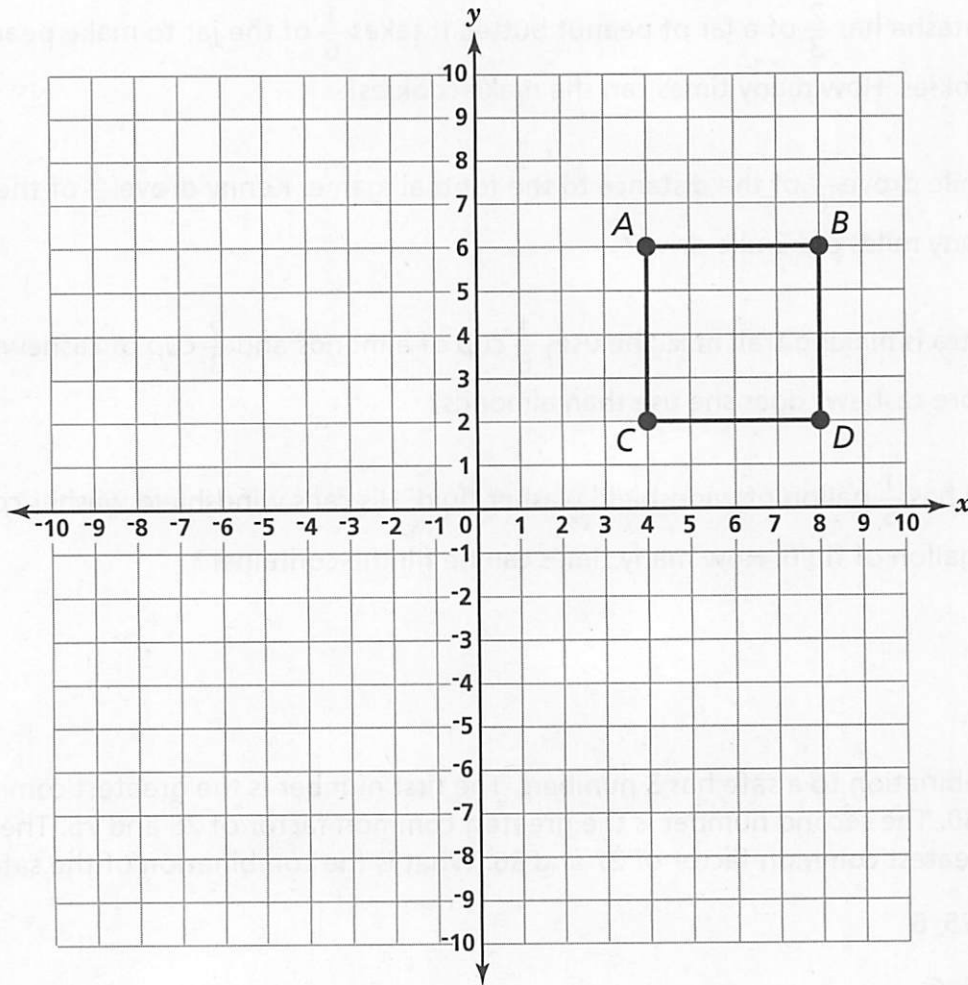
6 Which situation can be modeled using the expression $\frac{2}{3} \div \frac{1}{6}$?

- A** Natasha has $\frac{2}{3}$ of a jar of peanut butter. It takes $\frac{1}{6}$ of the jar to make peanut butter cookies. How many times can she make cookies?
- B** Emile drove $\frac{1}{6}$ of the distance to the football game. Kenny drove $\frac{2}{3}$ of the way. How many miles did Emile drive?
- C** Petra is making trail mix. She uses $\frac{1}{6}$ cup of almonds and $\frac{2}{3}$ cup of cashews. How many more cashews does she use than almonds?
- D** Ari has $\frac{1}{6}$ gallon of windshield washer fluid. His car's windshield washer container holds $\frac{2}{3}$ gallon of fluid. How many times can he fill the container?

7 The combination to a safe has 3 numbers. The first number is the greatest common factor of 16 and 40. The second number is the greatest common factor of 25 and 75. The third number is the greatest common factor of 27 and 36. What is the combination of the safe?

- A** 2, 25, 6
- B** 4, 5, 6
- C** 8, 5, 9
- D** 8, 25, 9

- 8** Jada plotted the points A , B , C , and D on the coordinate grid and formed a square.



What is the side length of the square?

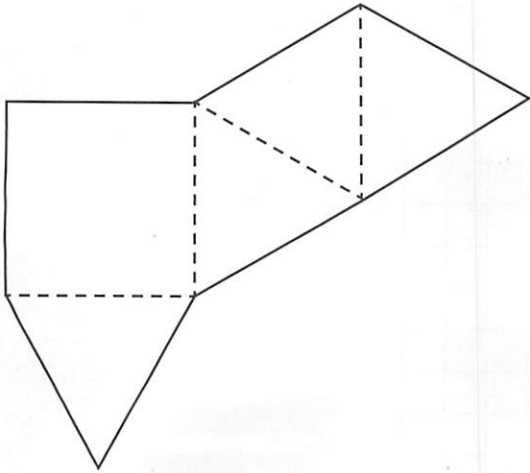
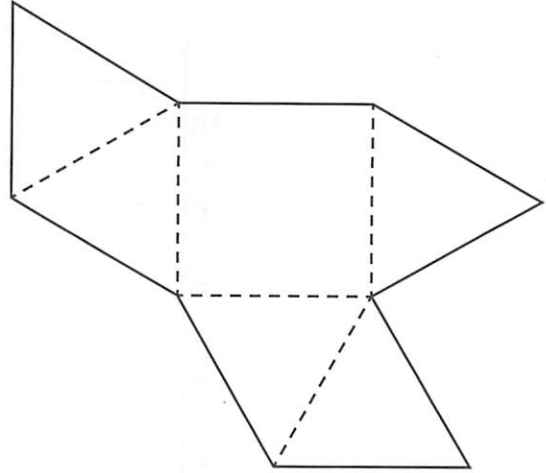
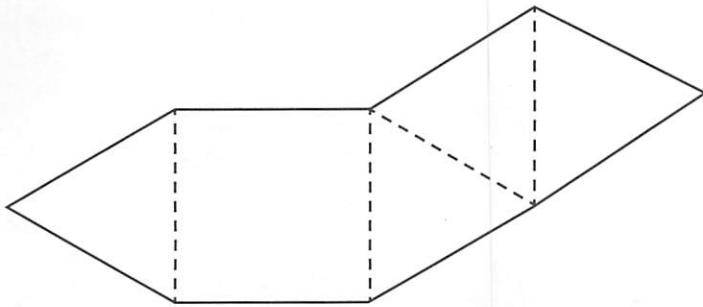
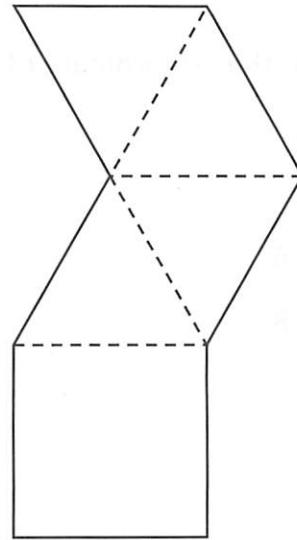
- A** 2 units
- B** 4 units
- C** 6 units
- D** 8 units

- 9** A hotel charges \$567.38 each day for its penthouse suite. How much would it cost to stay in the suite for 3 days?

- A** \$570.38
- B** \$564.38
- C** \$1,581.94
- D** \$1,702.14

10

Which net will form a square pyramid when folded?

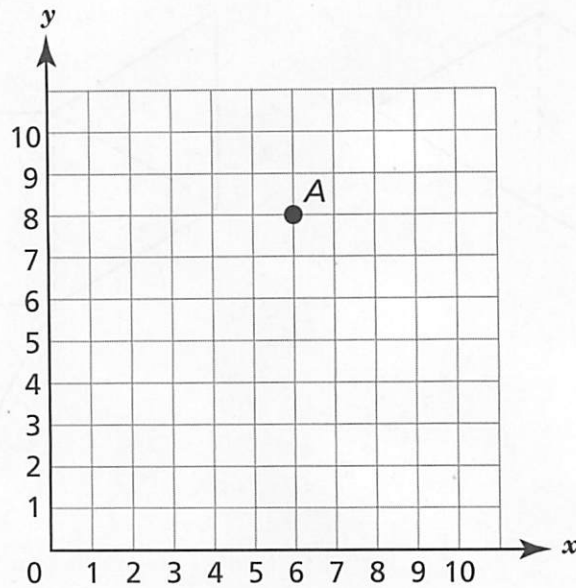
**A****C****B****D****11**

A printer in the school computer lab prints 56 pages in 4 minutes. At this rate how many pages does it print in 7 minutes?

- A** 84 pages
- B** 88 pages
- C** 98 pages
- D** 108 pages

Go On

- 12** Point A is shown on the coordinate plane below.



What is the x-coordinate of Point A?

- A** 8
 - B** 6
 - C** -6
 - D** -8
- 13** A rectangular prism has a volume of $114\frac{3}{4}$ cubic inches. If the length of the prism is $8\frac{1}{2}$ inches and the width is 3 inches, what is the height of the prism? Use the following formula.

$$V = l \times w \times h$$

- A** $2\frac{2}{4}$ inches
- B** $4\frac{1}{2}$ inches
- C** $4\frac{3}{4}$ inches
- D** $14\frac{3}{4}$ inches

14 The *Lost and Found* is a ship that searches the ocean floor for shipwrecks. The captain of the ship will use a coordinate grid to map out an area to be searched. The ship is searching an area outlined by the rectangle $A(-6, 4)$, $B(-1, 4)$, $C(-6, 8)$, $D(-1, 8)$. What is the perimeter of the search area?

- A 9 units
- B 18 units
- C 40 units
- D 41 units

15 Which expression is equal to $5(2x + 8)$?

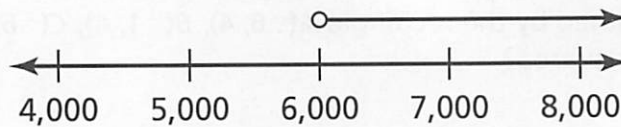
- A $40x - 10$
- B $10x - 40$
- C $10x + 40$
- D $40x + 10$

16 An architect builds a model of a building that is 50.8 centimeters long. What is the length of the model in inches?

$1 \text{ inch} = 2.54 \text{ centimeters}$

- A 129 inches
- B 53.34 inches
- C 48.28 inches
- D 20 inches

- 17** Consider the number line below.



Which inequality represents the number line?

- A** $x \leq 6,000$
- B** $x < 6,000$
- C** $x \geq 6,000$
- D** $x > 6,000$
- 18** Misako sold 12 old video games and 17 paperback books at a garage sale. She sold each item for the same price and made a total of \$72.50. What was the price of each item?
- A** \$0.33
- B** \$2.50
- C** \$18.00
- D** \$360.00
- 19** Hiroshi found that an antivirus program on his personal computer scans 182 megabytes of data in 7 seconds. At what rate does the antivirus program scan the data?
- A** 25 megabytes per second
- B** 26 megabytes per second
- C** 28 megabytes per second
- D** 30 megabytes per second

20

Four students wrote an algebraic expression to represent the following word expression.

Add seven to the product of z and ten

Name	Algebraic Expression
Joy	$7(z + 10)$
Junita	$7z + 10$
Roberto	$7 + 10z$
Donald	$10(7 + z)$

Whose algebraic expression represents the word expression?

- A Joy
- B Junita
- C Roberto
- D Donald

21

What is $4,453 \div 7$?

- A 636 R 1
- B 637 R 1
- C 646 R 1
- D 737 R 1

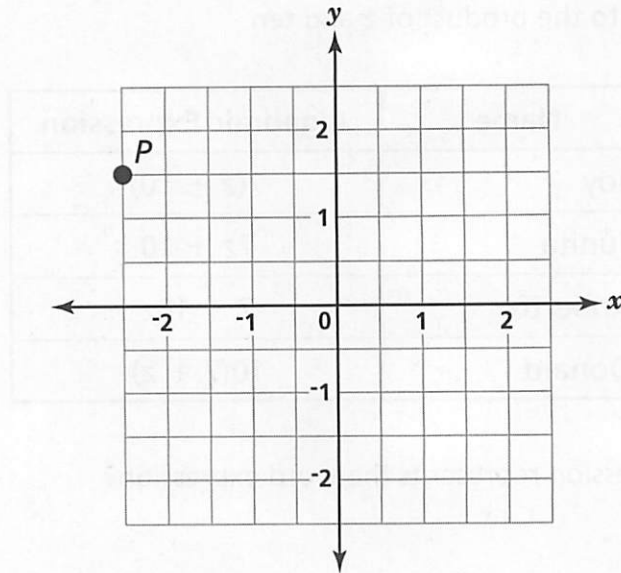
22

Which expression is equal to $a \times a \times a \times b \times b$?

- A a^2b^3
- B a^3b^2
- C $3a \times 2b$
- D $3a^3 \times 2b^2$

Go On

- 23** Consider the coordinate grid below.



What are the coordinates of point P ?

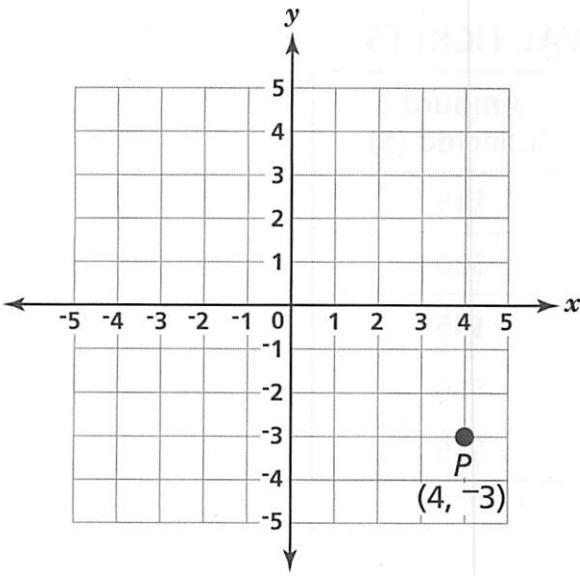
- A** $(-\frac{5}{2}, -\frac{3}{2})$
- B** $(-\frac{5}{2}, \frac{3}{2})$
- C** $(\frac{5}{2}, -\frac{3}{2})$
- D** $(-\frac{3}{2}, -\frac{5}{2})$

- 24** Which factor in the expression $6(2x + 5) + (x + 2y - 3) + (x + 2y - z + b)$ has three terms?

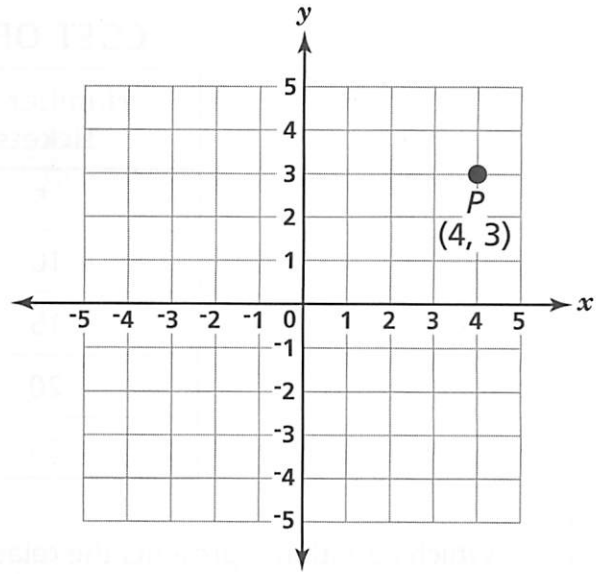
- A** 6
- B** $2x + 5$
- C** $x + 2y - z + b$
- D** $x + 2y - 3$

25

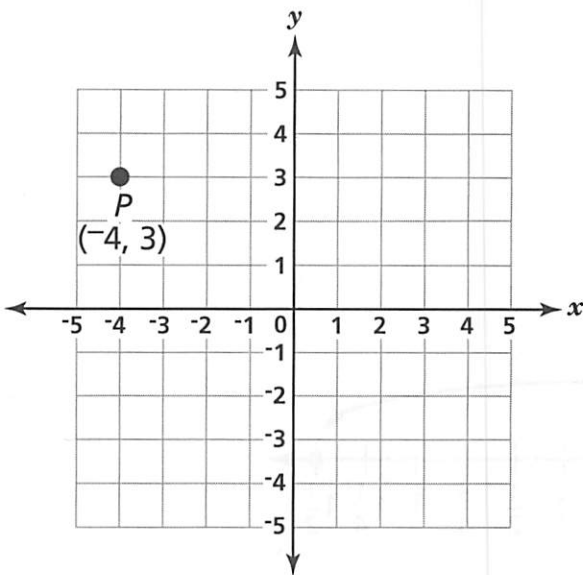
The point $(4, 3)$ is reflected across the x -axis and then across the y -axis. Which coordinate grid shows the reflected point?



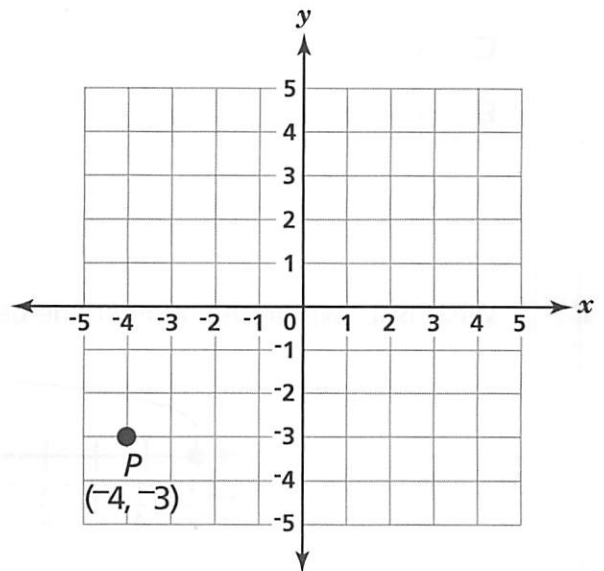
A



C



B



D

Go On

- 26** The table below shows the number of tickets, x , sold at a carnival and the total amount, y , in dollars collected.

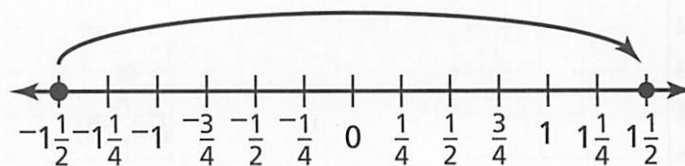
COST OF CARNIVAL TICKETS

Number of Tickets	Amount Collected (\$)
5	\$15
10	\$30
15	\$45
20	\$60
25	\$75

Which equation represents the relationship?

- A** $y = x + 10$
- B** $y = 5x$
- C** $y = x + 15$
- D** $y = 3x$

- 27** What is shown on the number line below?

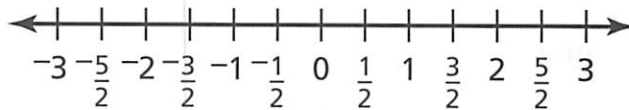


- A** the opposite of $-1\frac{1}{2}$
- B** the opposite of $-(-1\frac{1}{2})$
- C** the opposite of 0
- D** the opposite of $1\frac{1}{2}$

28 What is the result when 8.06 is subtracted from 22.92?

- A 14.86
- B 14.96
- C 24.86
- D 24.96

29 Refer to the number line below.



Which statement is *true*?

- A Since -1 is to the right of -2 , $-2 > -1$.
- B Since -1 is to the right of -3 , $-1 > -3$.
- C Since -2 is to the left of $-\frac{1}{2}$, $-2 > -\frac{1}{2}$.
- D Since -2 is to the left of 1 , $-2 > 1$.

30 Consider the two numerical patterns.

Pattern A: 0, 5, 10, 15, ...

Pattern B: 0, 10, 20, 30, ...

Which pair of rules describes the two patterns?

- A "Add 5" for Pattern A and "Add 10" for Pattern B
- B "Multiply by 5" for Pattern A and "Multiply by 10" for Pattern B
- C "Multiply by 5" for Pattern A and "Add 2" for Pattern B
- D "Add 10" for Pattern A and "Multiply by 2" for Pattern B

STOP

Answer items 31 through 60.

- 31** A rectangular box has a base area of 12 square centimeters. The height of the box is $3\frac{2}{3}$ centimeters. What is the volume of the box? Use the following formula.

$$V = l \times w \times h$$

- A** $15\frac{2}{3}$ cubic centimeters
- B** $39\frac{3}{11}$ cubic centimeters
- C** 44 cubic centimeters
- D** 72 cubic centimeters

- 32** The table below shows the amount of nuts needed for a certain number of servings of trail mix.

Cups of Nuts	Number of Servings
3	9
9	27

Which ratio is equivalent to the ratio of cups of nuts to the number of servings, as shown in the table?

- A** 6:16
- B** 21:63
- C** 30:800
- D** 21:56

33 What is the expression $(0.3)^2 - (0.2)^2 \cdot (0.5)$ simplified?

- A 0.01
- B 0.04
- C 0.07
- D 0.28

34 Which two factors can be multiplied to equal $12x + 15$?

- A $3(4x + 15)$
- B $4(3x + 15)$
- C $3(4x + 5)$
- D $4(3x + 5)$

35 George spent 70% of his savings to buy a camera. The camera costs \$574. How much did he originally have in his savings account?

- A \$644
- B \$738
- C \$800
- D \$820

36 An office supply store sells one pen for c cents. Which expression represents the cost of 8 pens, in cents?

- A $8 \div 8c$
- B $8 - c$
- C $8c$
- D $8 + c$

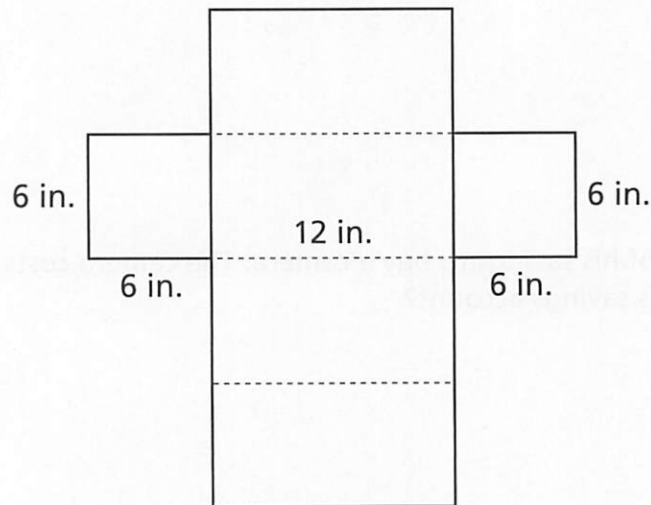
- 37** The sum of 28 and 42 can be expressed in two different ways using the distributive property.

$$28 + 42 = \square(2 + 3) = 7(4 + \square)$$

Which numbers complete the number sentence?

- A** 7 and 1
- B** 7 and 3
- C** 12 and 42
- D** 14 and 6

- 38** Rafael unfolded a cardboard gift box as shown.



What is the surface area of the box?

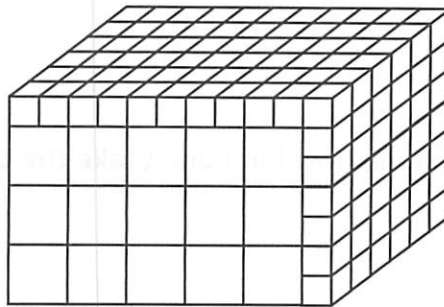
- A** 288 in.²
- B** 300 in.²
- C** 324 in.²
- D** 360 in.²

39 Simplify.

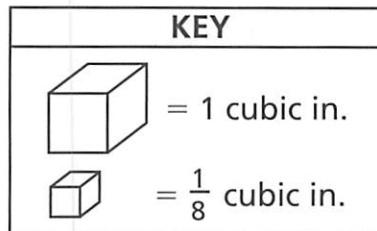
$$m + m + m + m + m + n + n$$

- A $5m + 2n$
- B $2m + 5n$
- C $5m + n$
- D $m + 5n$

40 A rectangular prism is $5\frac{1}{2}$ inches long, 3 inches wide, and $3\frac{1}{2}$ inches high.



[not drawn to scale]



What is the volume? Use the following formula.

$$V = l \times w \times h$$

- A $57\frac{3}{4}$ cubic inches
- B 57 cubic inches
- C $49\frac{1}{2}$ cubic inches
- D 45 cubic inches

Go On

- 41** Mr. Stevens asked four students in his math class to find the least common multiple of 4 and 6. Grace answered 2, Lyra answered 3, Samuel answered 12, and Brendan answered 24. Which student answered correctly?

- A** Grace
- B** Lyra
- C** Samuel
- D** Brendan

- 42** Use the formula below to find the time it took the Doyle family to travel d miles at a speed of r miles per hour, including a rest break.

$$t = 0.5 + \frac{d}{r}$$

If they average 50 miles per hour, how long did it take the Doyles to travel 240 miles?

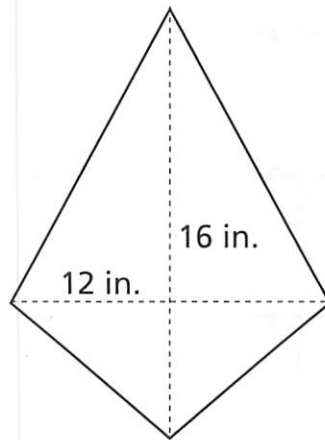
- A** 4.7 hours
- B** 4.8 hours
- C** 4.9 hours
- D** 5.3 hours

- 43** The county recreation department cleared a $\frac{3}{4}$ mile long walking trail in Washington Park. If the trail will be marked every $\frac{1}{12}$ mile with a small sign, how many signs are needed?

- A** 3
- B** 8
- C** 9
- D** 11

44

Ginger wants to make the kite shown below using tissue paper.



[not drawn to scale]

How much tissue paper does she need to make the kite?

- A 192 square inches
- B 96 square inches
- C 48 square inches
- D 22 square inches

45

Mrs. Trainer wrote the inequality below on the board.

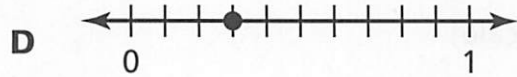
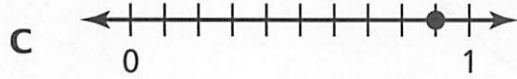
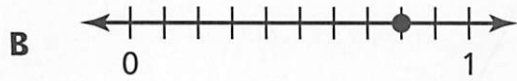
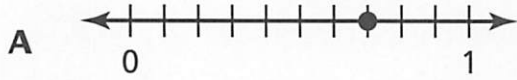
$$x \geq 10$$

Which statement **best** describes the solution?

- A The solution is finite and is only equal to 10.
- B The solution is infinite and includes all numbers.
- C The solution is finite and represents any number 10 or greater.
- D The solution is infinite and represents any number 10 or greater.

Go On

46 Which number line has the point located at 0.7?



47 What is the area of rectangle $ABCD$ whose vertices are $A(0, 0)$, $B(8, 0)$, $C(8, 4)$, and $D(0, 4)$?

- A** 24 square units
- B** 30 square units
- C** 32 square units
- D** 36 square units

48

The table below shows equivalent expressions for $5m^3 - 3$ written by four students in a math class.

Name	Expression
Ruby	$5(m + m + m) - 3$
Ricardo	$5(m^3 - 3)$
Ella	$5(m \times m \times m) - 3$
Darshan	$5(3m) - 3$

Who wrote the expression *correctly*?

- A Ruby
- B Ricardo
- C Ella
- D Darshan

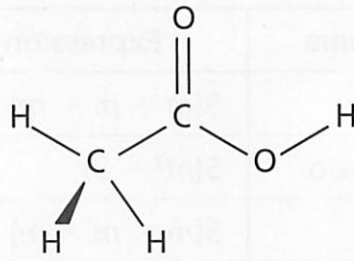
49

What is 164.4 divided by 2.4?

- A 680.5
- B 608.5
- C 394.5
- D 68.5

Go On

- 50** In science class, students are learning about organic compounds. The basic formula for acetic acid is shown below.

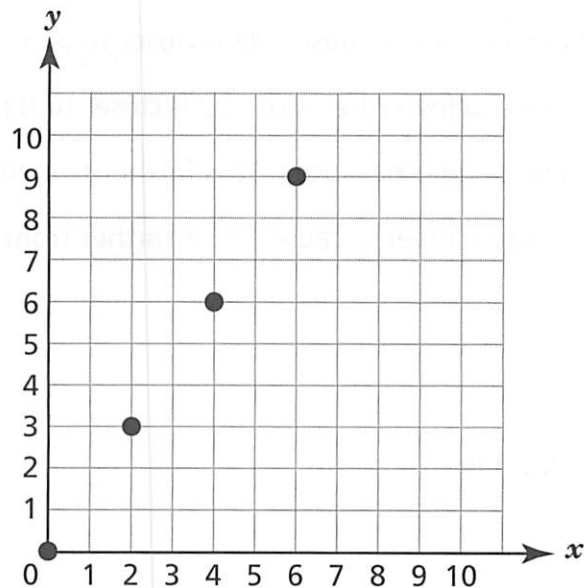


What is the ratio of carbon atoms (C) to hydrogen atoms (H)?

- A** 2:4
- B** 4:2
- C** 6:2
- D** 2:8
- 51** One January, the low temperature in Denver was -12°F and the low temperature in Chicago was -17°F . Which statement is **true**?
- A** Since $-12 < -17$, it was colder in Denver than in Chicago.
- B** Since $-12 > -17$, it was colder in Denver than in Chicago.
- C** Since $-17 > -12$, it was colder in Chicago than in Denver.
- D** Since $-17 < -12$, it was colder in Chicago than in Denver.
- 52** On a map with a coordinate grid overlay, a location 4 miles to the west of Main Street has an x-coordinate of -4 . On the same map, a location 6 miles to the east of Main Street has an x-coordinate of 6. Which statement **best** describes a location with an x-coordinate of 0?
- A** The location is on Main Street.
- B** The location is 1 mile east of Main Street.
- C** The location is 4 miles east of Main Street.
- D** The location is 6 miles west of Main Street.

53

Two numerical sequences are written as ordered pairs. The points are graphed below.



What are the rules for the two sequences?

- A** Start at 0 and add 2; start at 0 and add 3
- B** Start at 0 and add 2; start at 0 and multiply 3
- C** Start at 2 and multiply by 2; start at 3 and add 3
- D** Start at 3 and multiply by 2; start at 2 and multiply 3

54

How many terms are there in the expression $2x^2 + 5x + 7y - 6$?

- A** 2
- B** 3
- C** 4
- D** 7

Go On

- 55** As a result of erosion, the elevation of the floor of Little Neck Trench has changed from -32 feet to -27 feet. Which statement **best** explains the change due to erosion?
- A** The trench has grown deeper because -32 is closer to 0 on a number line than -27 .
 - B** The trench has grown shallower because -32 is closer to 0 on a number line than -27 .
 - C** The trench has grown deeper because -32 is farther from 0 on a number line than -27 .
 - D** The trench has grown shallower because -32 is farther from 0 on a number line than -27 .

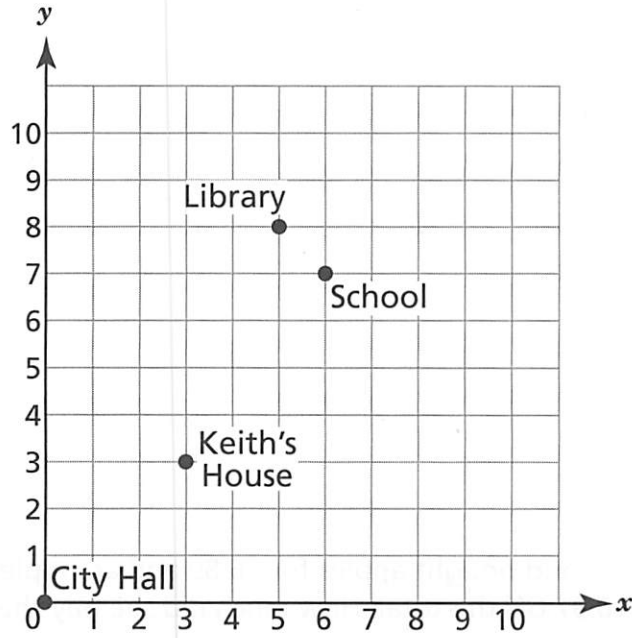
56 Which point lies in Quadrant IV?

- A** $(-5, 4)$
- B** $(-4, -1)$
- C** $(6, -8)$
- D** $(3, 2)$

57 An elevator can carry at most 13 people at a time. Which inequality represents the number of additional people who can get on the elevator if 5 people are already on?

- A** $n \geq 13$
- B** $n \geq 8$
- C** $n \leq 13$
- D** $n \leq 8$

The map shows some landmarks in Keith's hometown.



What are the coordinates of the school?

- A (7, 6)
- B (6, 7)
- C (3, 3)
- D (0, 0)

59 Which statement *best* describes the expression $-(-9)$?

A the opposite of -9

B the opposite of $-\frac{1}{9}$

C the opposite of 9

D the opposite of $\frac{1}{9}$

60 Janet visited an orchard and bought apples for \$6.89 and an apple pie for \$5.50. She had a discount coupon for \$0.97 off the total. How much did she pay the cashier?

A \$11.42

B \$12.39

C \$12.62

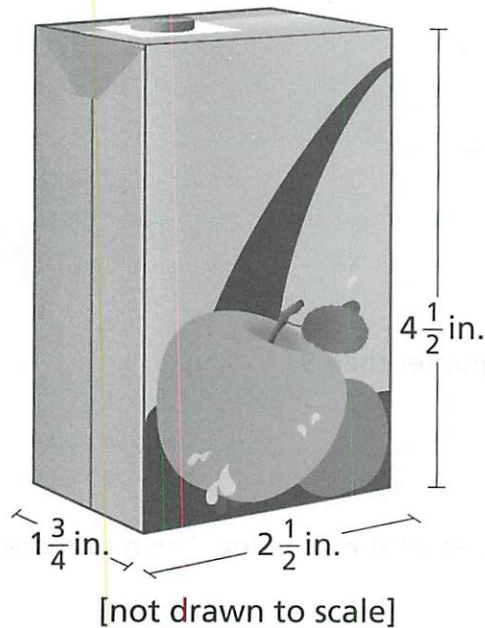
D \$13.36

STOP

Practice Test 2: Book 3

Answer items 61 through 69.

- 61** The figure shows the length, width, and height of a snack-sized box of apple juice.



Part A

What is the volume of the juice box? Use the following formula.

$$V = l \times w \times h$$

Show your work.

Answer _____

Go On

Part B

What will the volume of the juice box be if the width of the base is equal to its length?

Show your work.

Answer _____

62 Twice a number plus 6 is greater than 9.

Part A

Write an inequality to represent the situation. Use n to represent the number.

Answer _____

Part B

How many solutions does the inequality have?

Answer _____

Part C

Represent the solution on a number line.

Show your work.

63

Bella is making flower baskets to sell at a craft fair. She has 16 gerbera daisy plants and 24 African violet plants.

Part A

Bella wants each flower basket to be the same. If she uses all of the plants, what is the *greatest* number of flower baskets she can make?

Answer _____

Part B

How many gerbera daisies and African violets will be in each flower basket?

Answer _____

64

Hannah does two puppet shows at the local community fair every year.

Part A

She uses a piece of material 18 inches long to make a costume for each puppet in the first show. If there are 6 puppets in the first show, how many yards of fabric does she need?

1 yard = 36 inches

Show your work.

Answer _____ yards

Go On

Part B

For the 8 puppets in the second show, she uses a total of 6 yards of fabric to make the costumes. How much fabric, in inches, does she need to make one costume?

Show your work.

Answer _____ inches

Part C

What is the total amount of fabric she needs, in feet, to make the costumes for all the puppets?

1 yard = 3 feet

Show your work.

Answer _____ feet

65 The cost to take a class at a local community college is \$169 per credit.

Part A

Write an expression to represent the cost of a class based on the number of credits, c .

Answer _____

Part B

The college decided to charge each student a registration fee of \$250 in addition to \$169 per credit. Write an expression to find how much a student would pay to take a class now.

Answer _____

66 Craig is building a storage box that is 4 feet by 4 feet by 6 feet out of plywood.

Part A

Draw the net of the box.

Show your work.

Part B

Use the net to find the surface area of the box.

Show your work.

Answer _____ square feet

Part C

If the plywood costs \$0.50 per square foot, how much will Craig spend on plywood?

Answer _____

67 Two sessions of swimming lessons were held at a pool.

Part A

In the first session, 40 students attended. Of these 40 students, 60% were girls. How many girls attended the first session of swimming lessons?

Answer _____

Part B

There were 20 girls and 30 boys in the second session. What is the percentage of boys in the second session of swimming lessons?

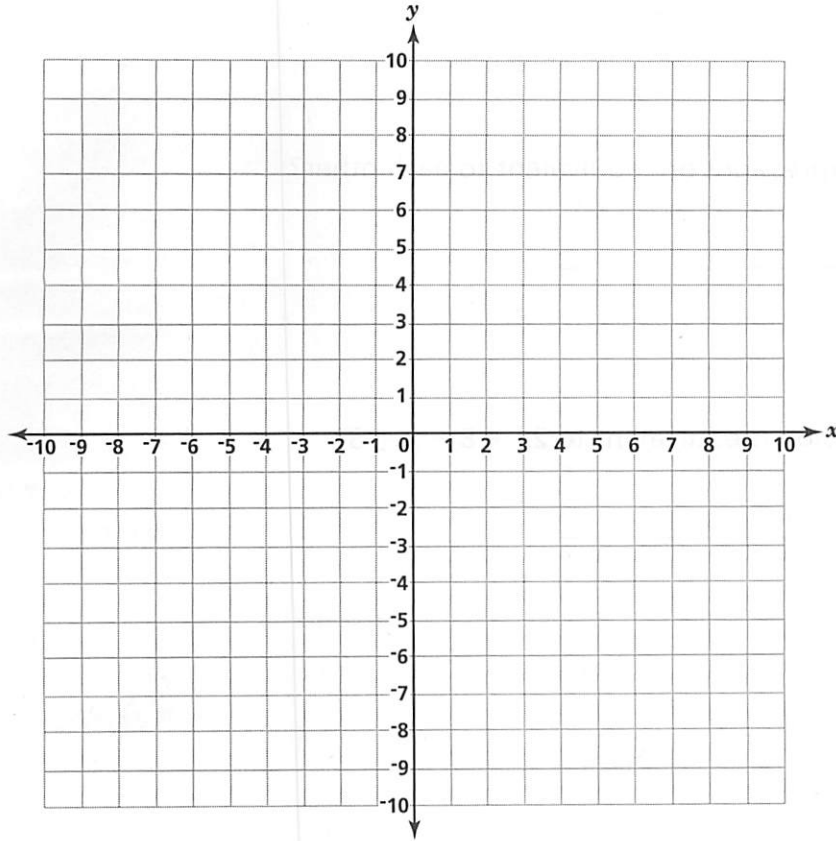
Answer _____

68

The three points $A(-2, 4)$, $B(-5, 4)$, and $C(-5, 9)$ are three vertices of a rectangle $ABCD$.

Part A

Mark the coordinates on the coordinate plane.



Part B

What is the fourth vertex of the rectangle? Explain your answer.

Part C

What are the side lengths of the rectangle?

Answer _____

Go On

Mr. Lindsay wrote the four expressions below on the board.

Expression 1: $9 + 5x - 5 + 3x$

Expression 2: $10x + 3$

Expression 3: $x + 11$

Expression 4: $4(1 + 2x)$

Part A

Which two expressions are equivalent to each other?

Answer _____

Part B

Which expression is equivalent to $2x + 8 - x + 3$?

Answer _____

STOP

Practice Test 3: Book 1

Answer items 1 through 30.

1 Which expression *best* represents the opposite of the opposite of $8\frac{1}{4}$?

A $-\left(8\frac{1}{4}\right)$

B $-(-8\frac{1}{4})$

C $+(-8\frac{1}{4})$

D $+(+8\frac{1}{4})$

2 A rectangle is 8 feet long and $(7 + x)$ feet wide. Which expression represents the area of the rectangle in square feet?

A $15 + x$

B $56 + x$

C $56 + 7x$

D $56 + 8x$

3 A sporting goods store charges \$30 for 12 cans of tennis balls. The tennis coach orders 100 cans of tennis balls for the tennis team. How much will the coach pay for the tennis balls?

A \$220

B \$250

C \$280

D \$300

Go On

4 The temperature in Salt Lake City was -10.6°C . Which absolute value equation *best* describes how many degrees the temperature was below 0°C ?

- A $|-10.6| = -10.6$
- B $|-10.6| = -10$
- C $|-10.6| = 10$
- D $|-10.6| = 10.6$

5 The volume of a room is $1,258\frac{3}{5}$ cubic meters. The height of the room is $11\frac{3}{5}$ meters. What is the area of the floor? Use the following formula.

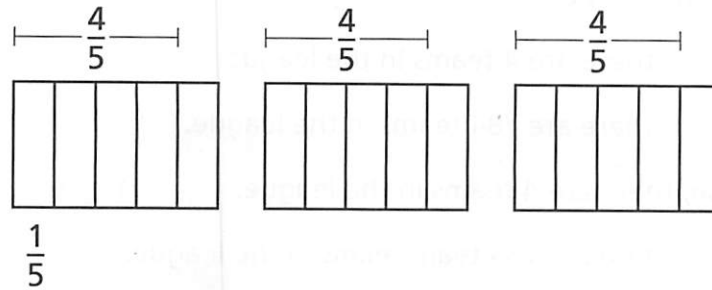
$$V = l \times w \times h$$

- A $108\frac{1}{2}$ square meters
- B $111\frac{7}{20}$ square meters
- C 1,247 square meters
- D $14,599\frac{19}{25}$ square meters

6 Gomez weighed two containers of sand for a science project. The first container weighed 19.28 grams. The second container weighed 25.3 grams. How much more did the second container weigh than the first container?

- A 6.02 grams
- B 6.18 grams
- C 21.81 grams
- D 44.58 grams

- 7 Use the diagram below.



What is the value of the expression $3 \div \frac{4}{5}$?

- A $\frac{3}{5}$
- B $2\frac{2}{5}$
- C $3\frac{3}{5}$
- D $3\frac{3}{4}$

- 8 Ryan is making pancakes for the Drama Club's pancake breakfast. The table below shows the amounts of pancake mix and milk needed to make enough pancakes to feed the number of guests attending the breakfast.

PANCAKES

Number of Servings	Amount of Mix (Cups)	Amount of Milk (Cups)
7	2	1
14	4	2
21	6	3
28	8	4

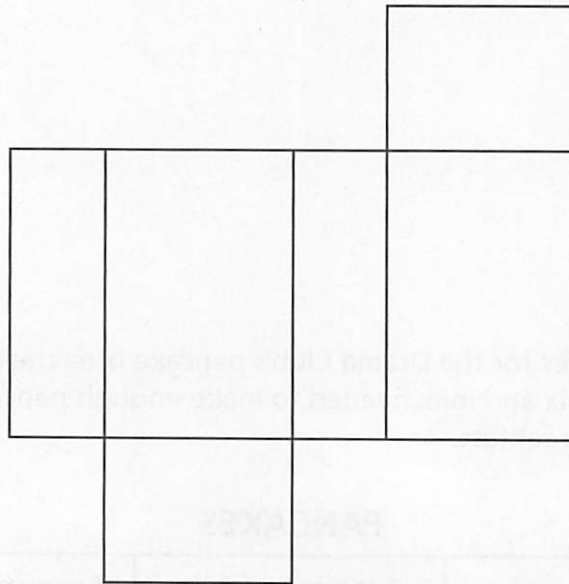
If the club sold 63 tickets to the breakfast, how much pancake mix and milk will be needed?

- A 7 cups of mix and 7 cups of milk
- B 18 cups of mix and 9 cups of milk
- C 63 cups of mix and 21.5 cups of milk
- D 324 cups of mix and 81 cups of milk

9 Each basketball team in a basketball league has 14 players. A total of 56 players signed up to play. Which statement is *true*?

- A** Since $14(56) = t$, there are 4 teams in the league.
- B** Since $14(56) = t$, there are 784 teams in the league.
- C** Since $14t = 56$, there are 4 teams in the league.
- D** Since $14t = 56$, there are 784 team teams in the league.

10 A juice manufacturing company designed a carton as shown below.



Which three-dimensional figure can be formed from this design?

- A** rectangular prism
- B** square prism
- C** rectangular pyramid
- D** square pyramid

- 11** The perimeter of square $WXYZ$ is 20 units. The coordinates of three of the vertices are $W(3, 2)$, $X(3, 7)$, and $Y(8, 7)$.

What are the coordinates of vertex Z ?

- A** $(8, -2)$
- B** $(-8, 2)$
- C** $(8, 2)$
- D** $(-8, -2)$

- 12** A plant is 20 inches tall. If the plant grows the same amount, h , each week for the next 4 weeks, what will be the height of the plant after 4 weeks?

- A** $20 + 4h$
- B** $20 - 4h$
- C** $20 - h$
- D** $20 + h$

- 13** Erika has 3 pieces of ribbon. Each piece is 25 yards long. She needs to cut pieces that are 22 inches long. What is the greatest number of 22-inch pieces that she can cut from the three ribbons?

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

- A** 163
- B** 120
- C** 40
- D** 4

14 What is the distance between the points $A(3, 4\frac{1}{4})$ and $B(3, 6\frac{1}{2})$?

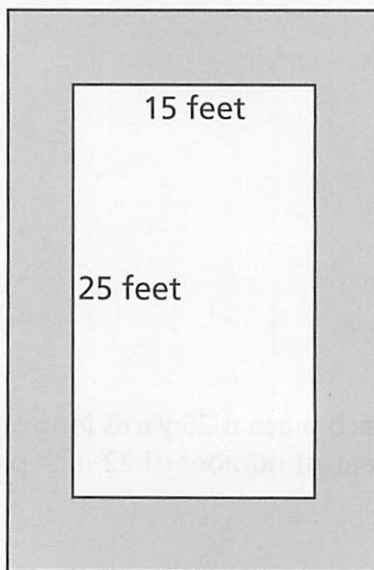
A $2\frac{1}{4}$ units

B $2\frac{1}{2}$ units

C $2\frac{3}{4}$ units

D $3\frac{1}{4}$ units

15 The Gonzalases plan to add a rectangular shaped pool to their backyard. The pool will have a 4-foot deck around it. Refer to the diagram below.



[not drawn to scale]

What is the area of the deck?

A 759 square feet

B 375 square feet

C 384 square feet

D 231 square feet

16 Which statement is *true*?

- A The greatest common factor of 10 and 14 is 5.
- B The greatest common factor of 10 and 15 is 5.
- C The greatest common factor of 13 and 21 is 3.
- D The greatest common factor of 14 and 21 is 3.

17 Look at the expression below.

$$\frac{1}{2}(a + b) - (a - b)^2$$

What is the value of the expression when $a = 18$ and $b = 14$?

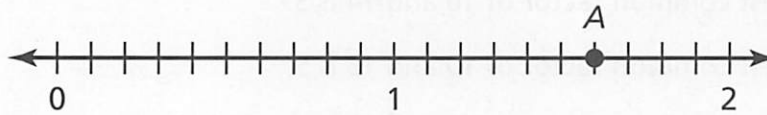
- A 14
- B 12
- C 0
- D $\frac{1}{2}$

18 Nathan needs to sell at least 75 T-shirts to get a bonus. He has sold 38 of them already. How many more T-shirts, t , does he need to sell to get a bonus?

- A $t \geq 37$
- B $t > 37$
- C $t \leq 75$
- D $t > 75$

Go On

- 19** What is the value of point A on the number line?



- A** 1.6
B 1.7
C 2.4
D 2.5
- 20** Dan plotted the points $A(-2, -1)$, $B(3, 9)$, $C(-5, 1)$, and $D(1, -4)$ on a coordinate grid. Which point lies in Quadrant III?

- A** point A
B point B
C point C
D point D

- 21** Consider the two numerical patterns given below.

Pattern A: 0, 4, 8, 12, ...

Pattern B: 0, 12, 24, 36, ...

Which statement describes the relationship between the corresponding terms of the two patterns?

- A** Each term of Pattern B is three times the corresponding term of Pattern A.
B Each term of Pattern A is three times the corresponding term of Pattern B.
C Each term of Pattern A is 12 more than the corresponding term of Pattern B.
D Each term of Pattern B is 8 more than the corresponding term of Pattern A.

- 22** The school bookstore has 108 book covers. They will be equally distributed among the students in the 2 sixth grade classes. Each class has 18 students. How many book covers does each student receive?
- A** 54
 - B** 36
 - C** 6
 - D** 3

- 23** The distance and time of practice runs for four students on the cross-country team are shown in the table below.

Runner	Distance (miles)	Time (minutes)
Sean	3	21
Gwen	4	32
Marc	5	30
Imani	2	14

Which runner runs one mile in the fastest time?

- A** Sean
- B** Gwen
- C** Marc
- D** Imani

24 How many factors in the expression $8(x + 4)(y + 4)(z^2 + 4z + 7)$ have two terms?

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

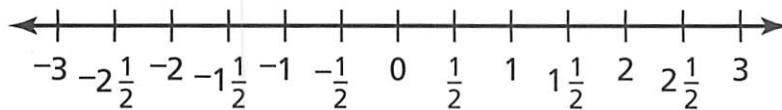
25 The students in Mr. Piecewicz's science class begin each test with a score of 100. At the top of the test, he writes a positive or negative number to indicate how their final score will differ from 100. A positive number means the student's grade is more than 100. A negative number means the student's grade is less than 100. What would be the final score of paper with 0 written at the top?

- A 0
- B 96
- C 100
- D 127

26 A car salesman's total salary, s , is a base salary plus a commission. The salesman has a base salary \$40,000 and receives a commission of \$200 for every car, c , he sells. Which equation represents the total salary for the salesman?

- A $s = 40,000 - 200c$
- B $s = 40,000c + 200$
- C $s = 40,000 + 200c$
- D $s = 40,000 + \frac{c}{200}$

- 27** Consider the number line below.



Which statement **best** compares $-1\frac{1}{2}$ and $-2\frac{1}{2}$?

- A** Since $-2\frac{1}{2}$ and $-1\frac{1}{2}$ are both the same distance from 0, $-2\frac{1}{2} = -1\frac{1}{2}$.
- B** Since $-2\frac{1}{2}$ and $-1\frac{1}{2}$ are both one space from -2, $-2\frac{1}{2} = -1\frac{1}{2}$.
- C** Since $-2\frac{1}{2}$ is farther from 0 than $-1\frac{1}{2}$, $-2\frac{1}{2} > -1\frac{1}{2}$.
- D** Since $-2\frac{1}{2}$ is to the left of $-1\frac{1}{2}$, $-2\frac{1}{2} < -1\frac{1}{2}$.

- 28** The local grocery store is having a sale on watermelons. Mrs. Jackson purchases 10 watermelons for a school picnic. She pays for \$39.90 for the watermelons. What is the price of each watermelon?

- A** \$39.90
- B** \$3.99
- C** \$3.90
- D** \$0.39

29 Which expression is equivalent to the expression $\left(\frac{1}{2}\right)^3$?

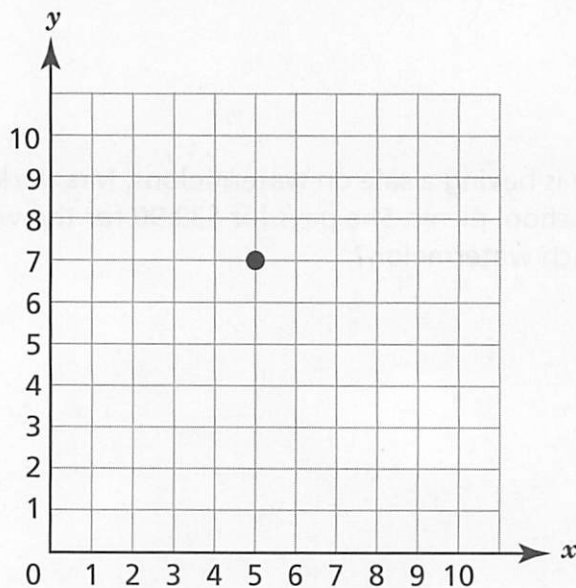
A $3 \times \frac{1}{2}$

B $\frac{1}{2} + \frac{1}{2} + \frac{1}{2}$

C $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$

D $3 + \frac{1}{2}$

30 What are the coordinates of the point on the graph?



A (5, 0)

B (0, 7)

C (5, 7)

D (7, 5)

STOP

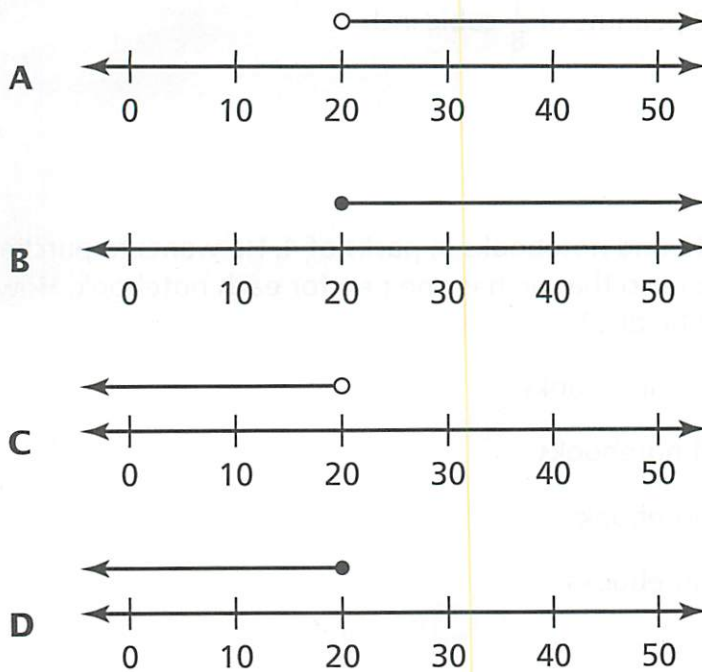
Practice Test 3: Book 2

Answer items 31 through 60.

- 31** Consider the statement below.

Less than 20 students participated in a drawing competition.

Which number line *best* represents the statement?



- 32** Which expression is equal to $p + p + q + q + q + r + r$?

- A** $2p + 2q + 2r$
B $2p + 3q + 2r$
C $2p + 3q + r$
D $2p + 3q + 3r$

Go On

- 33** Ricky is filling an 8-inch by 4 inch by $4\frac{1}{2}$ inch rectangular box with packing peanuts. The peanuts are cubes that come in two different sizes, 1 cubic inch and $\frac{1}{8}$ cubic inch. How many peanuts of each size are needed to fill the box? Use the following formula.

$$V = l \times w \times h$$

- A** 128 peanuts of 1 cubic inch + 16 peanuts of $\frac{1}{8}$ cubic inch
- B** 128 peanuts of 1 cubic inch + 32 peanuts of $\frac{1}{8}$ cubic inch
- C** 128 peanuts of 1 cubic inch + 128 peanuts of $\frac{1}{8}$ cubic inch
- D** 16 peanuts of 1 cubic inch + 32 peanuts of $\frac{1}{8}$ cubic inch

- 34** Juan can purchase pens in packs of 12 and notebooks in packs of 4. He wants to purchase the least number of packs of the two items so that he has one pen for each notebook. How many packs of pens and notebooks should he buy?

- A** 12 packs of pens and 12 packs of notebooks
- B** 12 packs of pens and 2 packs of notebooks
- C** 1 pack of pens and 4 packs of notebooks
- D** 1 pack of pens and 3 packs of notebooks

- 35** What is the result of the expression $(8 - 3)^2 - (5 - 2)^2$?

- A** 4
- B** 16
- C** 26
- D** 46

36

The Youngs are having a new room built onto their house. The contractor will dig a hole that is 40 feet long and $10\frac{1}{2}$ feet deep. What is the width of the room if 6,510 cubic feet of dirt is removed? Use the following formula.

$$V = l \times w \times h$$

- A 80 feet
- B $81\frac{1}{4}$ feet
- C 16 feet
- D $15\frac{1}{2}$ feet

37

Anna has n number of nickels. She has less than 45 cents. Which inequality could be used to find the value of n ?

- A $\$0.05n < \0.45
- B $\$0.05n > \0.45
- C $\$0.05n \leq \0.45
- D $\$0.05n \geq \0.45

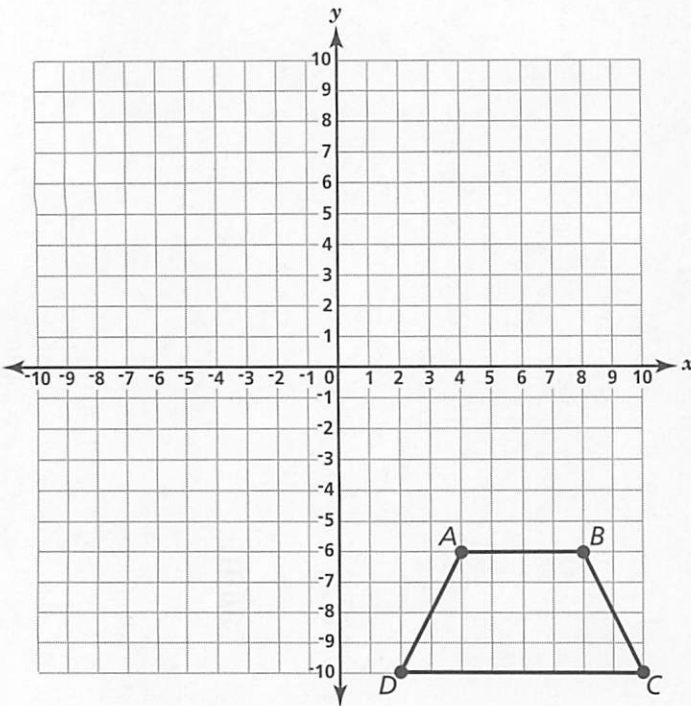
38

On a particular Saturday, 60% of the visitors to an art museum were students. If 144 students visited the museum, how many total visitors did the art museum have that day?

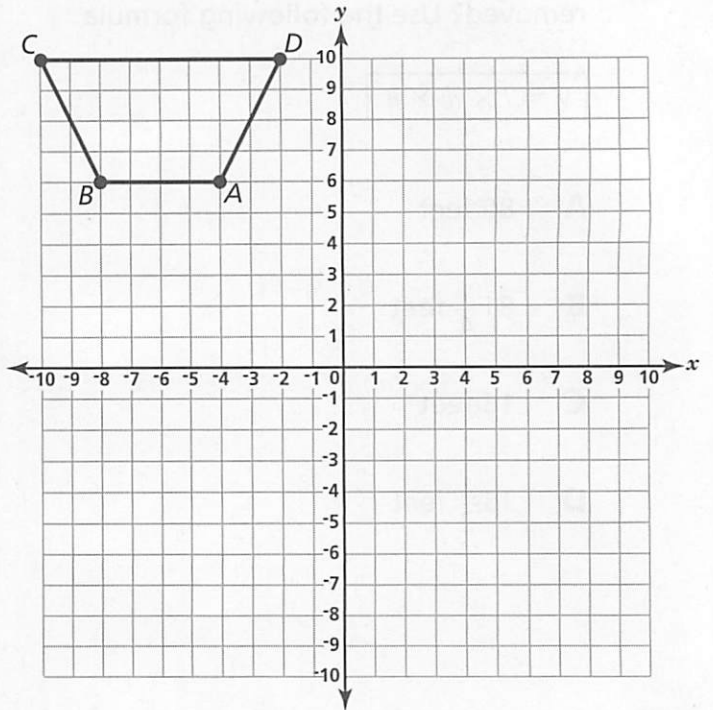
- A 200
- B 204
- C 220
- D 240

Go On

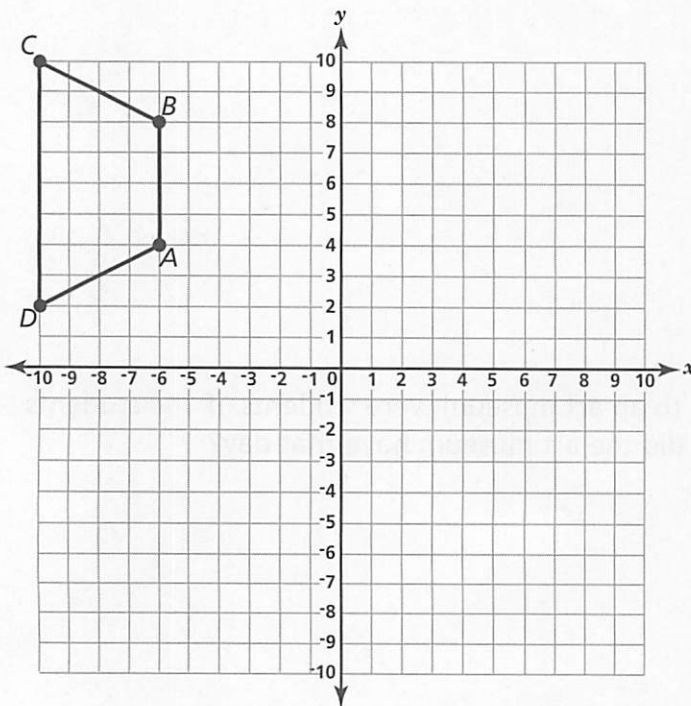
39 Which figure represents the trapezoid $ABCD$ whose vertices are $A(-6, 4)$, $B(-6, 8)$, $C(-10, 10)$ and $D(-10, 2)$?



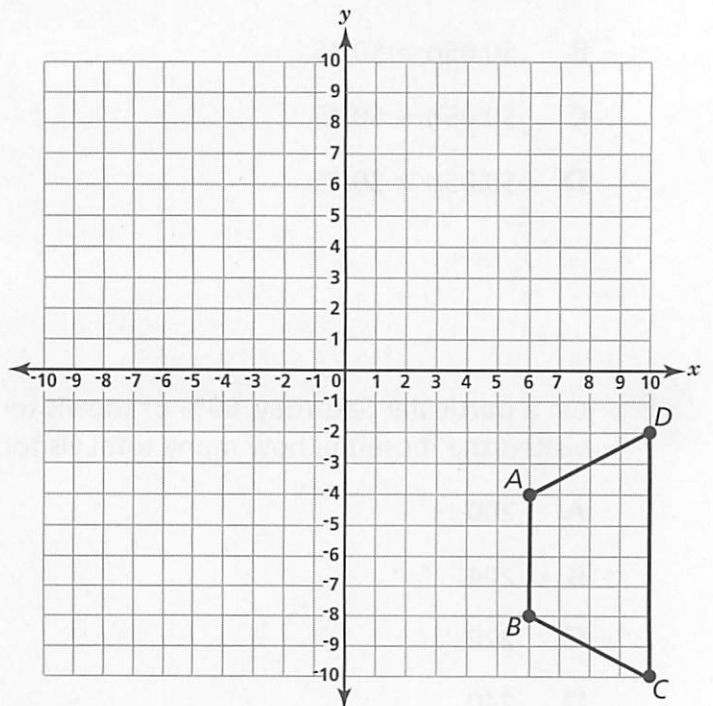
A



C



B

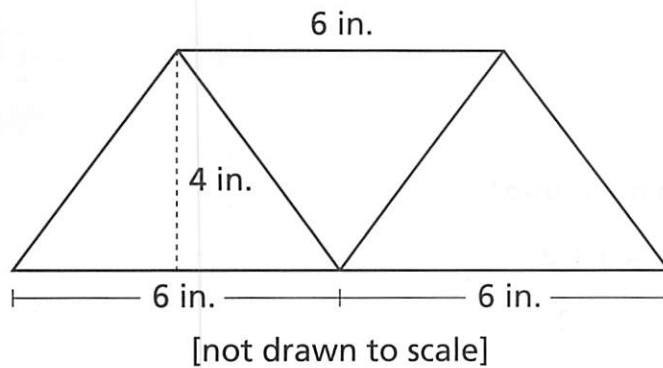


D

40 What are the factors of $6x + 24$?

- A 4 and $(x + 6)$
- B 4 and $(x + 24)$
- C 6 and $(x + 24)$
- D 6 and $(x + 4)$

41 Consider the trapezoid shown below.



What is the area of the trapezoid?

- A 36 square inches
- B 72 square inches
- C 144 square inches
- D 288 square inches

42 Sabina had \$40. She paid d dollars for lunch. Which expression represents the amount of money Sabina has left?

- A $40 + d$
- B $40d$
- C $40 - d$
- D $\frac{40}{d}$

43 A piece of wood that is $\frac{3}{4}$ of a meter long is being cut into smaller pieces that are each $\frac{1}{10}$ of a meter long. Which expression is one of the steps in determining how many pieces can be cut?

A $\frac{3}{4} \times \frac{1}{10}$

B $\frac{3}{4} \times \frac{10}{1}$

C $\frac{10}{1} \times \frac{4}{3}$

D $\frac{1}{10} \times \frac{3}{4}$

44 Which number sentence is *true*?

A $4y^2 + 2 = (4y \times 4y) + 2$

B $4y^2 + 2 = (4y + y) + 2$

C $4y^2 + 2 = 4(y + y) + 2$

D $4y^2 + 2 = 4(y \times y) + 2$

45 Mrs. Donetelli wrote the following situation on the board:

The library has at least 5,000 books.

Which inequality represents the situation and has an infinite number of solutions?

A $b > 5,000$

B $b \geq 5,000$

C $b < 5,000$

D $0 < b \leq 5,000$

Misty saves the same amount of money every week from her weekly earnings. Some of her savings are shown in the table below.

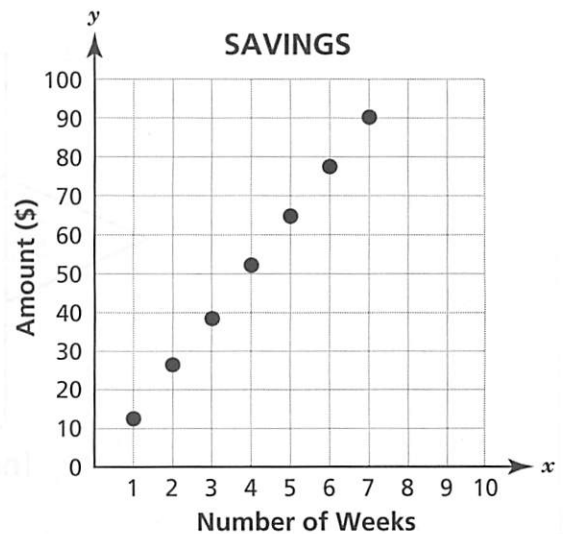
SAVINGS

Number of Weeks	Amount (\$)
3	39
4	52
5	65
6	78

Which graph correctly plots the data in the table?



A



C



B



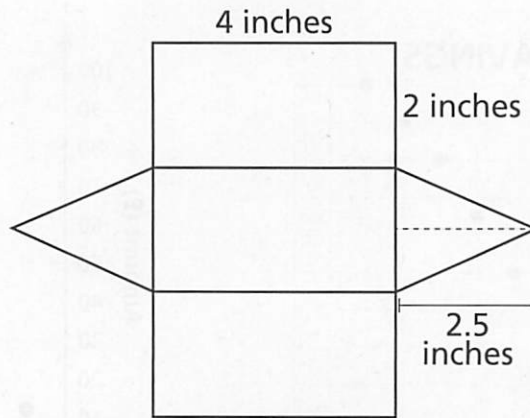
D

Go On

47 Which number sentence uses the greatest common factor and the distributive property to rewrite the addition problem?

- A** $20 + 28 = 2(10 + 7)$
- B** $21 + 39 = 3(7 + 13)$
- C** $24 + 36 = 6(4 + 30)$
- D** $16 + 48 = 4(4 + 24)$

48 Lucia is wrapping a package in the shape of a triangular prism. The net of the prism is shown below.

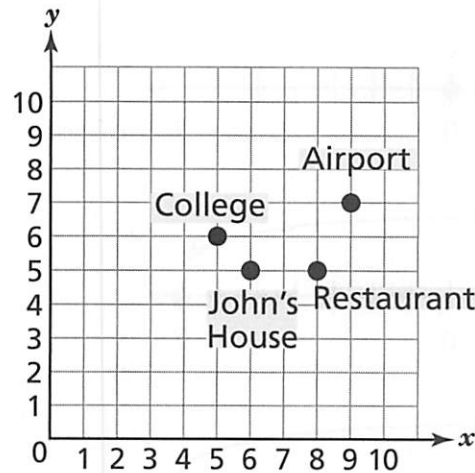


If the paper cost \$0.35 per square inch, how much will Lucia pay for the wrapping paper?

- A** \$8.40
- B** \$9.28
- C** \$10.15
- D** \$12.25

49

John plotted the location of his house and some landmarks on the coordinate plane as shown.



Where would John be if he traveled to the place located at (5, 6)?

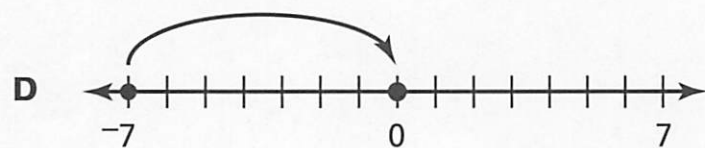
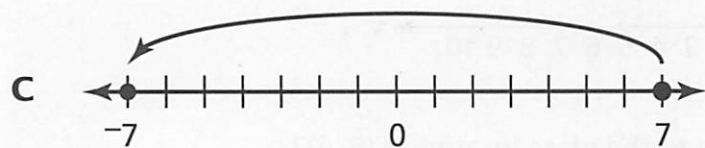
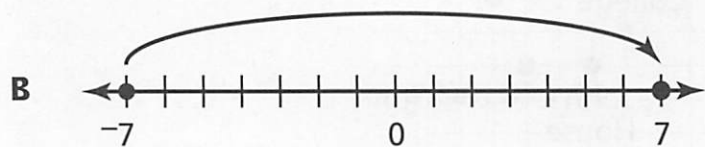
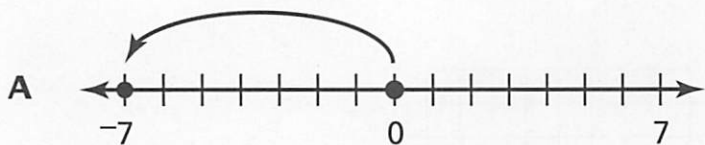
- A Restaurant
- B College
- C Airport
- D John's House

50

A youth ice hockey game has 3 periods that are each 20 minutes long. Colin is on the ice about 12 minutes each period. Which ratio shows Colin's playing time compared to the total number of minutes of playing time possible?

- A 3 to 12
- B 20 to 12
- C 36 to 3
- D 36 to 60

51 Which number line represents the expression $-(-7)$?



52 Which point is the image of point $R(-2, 9)$ first reflected across the y -axis and then across the x -axis?

A $(-9, -2)$

B $(-2, -9)$

C $(2, -9)$

D $(9, -2)$

53 The outer core, at its deepest point, is $-3,160$ miles below Earth's crust. The inner core, at its deepest point, is $-3,954$ miles below Earth's crust. Which is closer to Earth's crust?

A Since $|-3,160| > |-3,954|$, the outer core is closer to the Earth's crust.

B Since $|-3,160| < |-3,954|$, the outer core is closer to the Earth's crust.

C Since $|-3,160| < |-3,954|$, the inner core is closer to the Earth's crust.

D Since $|-3,160| > |-3,954|$, the inner core is closer to the Earth's crust.

54

Ms. Benjamin asked four students to write the word form of the following algebraic expression.

$$10b - 12$$

The table shows their answers.

Name	Word Form
Jessica	Twelve is multiplied by the difference of 10 and b .
Owen	Ten is multiplied by the difference of 12 and b .
Enrique	Ten is subtracted from the product of 12 and b .
Sophia	Twelve is subtracted from the product of 10 and b .

Who wrote the word form correctly?

- A Jessica
- B Owen
- C Enrique
- D Sophia

55

A topographic map of the park in Wolf Basin lists the elevation of the park ranger station as -21 feet and the elevation of the park visitor center as -29 feet. Which statement is *true*?

- A Since $-29 < -21$, the park ranger station is at a higher elevation than the park visitor center.
- B Since $-29 > -21$, the park ranger station is at a higher elevation than the park visitor center.
- C Since $-29 < -21$, the park visitor center is at a higher elevation than the park ranger station.
- D Since $-29 > -21$, the park visitor center is at a higher elevation than the park ranger station.

Go On

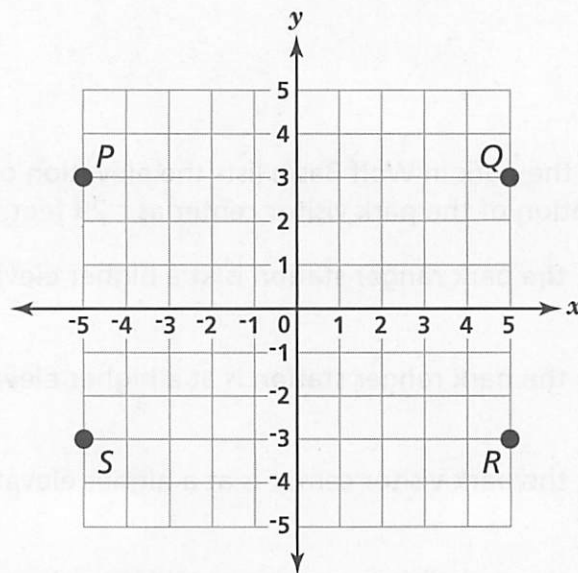
56 Jasmine has \$8.05. She bought a bracelet for \$6.96. How much money does Jasmine have left?

- A \$2.91
- B \$2.09
- C \$1.19
- D \$1.09

57 What are the coefficients in the expression $8y^2 + 12x - 5y + 7$?

- A 5, 8, 12
- B -5, 8, 12
- C -5, 7, 8
- D -5, 12, 7

58 Which point on the coordinate grid below represents $(5, -3)$?



- A point R
- B point Q
- C point P
- D point S

59 Which set of coordinates follows these two rules?

x-coordinates: start at 4 and add 4

y-coordinates: start at 4 and multiply by 2

- A (4, 4), (8, 8), (12, 16)
- B (4, 4), (8, 8), (16, 16)
- C (4, 4), (6, 16), (8, 64)
- D (4, 4), (16, 2), (64, 0)

60 A local farm charges \$4.50 a pint to pick your own raspberries. Diedre picked 5.75 pints of raspberries. How much did she pay for the raspberries? Round your answer to the nearest cent.

- A \$23.36
- B \$24.88
- C \$25.87
- D \$25.88

STOP

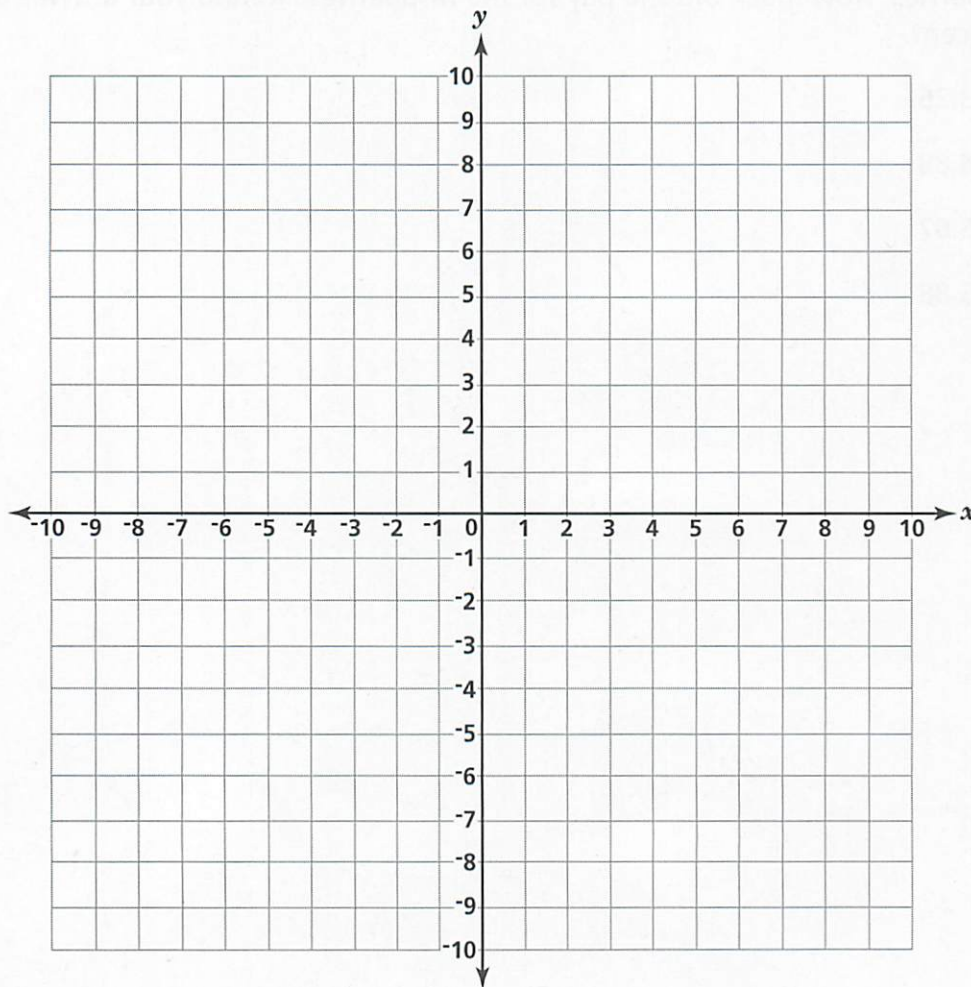
Practice Test 3: Book 3

Answer items 61 through 69.

- 61** The locations of Janelle's house and Diantha's house from a playground located at $O(0, 0)$ on a coordinate plane with a unit of 1 mile are given by the coordinates $J(-2, 4)$ and $D(2, 4)$.

Part A

Plot the locations of Janelle's house, Diantha's house, and the playground on the coordinate plane.



Part B

Diantha is riding her bike from her house to Janelle's house. How far does Diantha ride her bike?

Answer _____

62

Rocco spent 20% of the money in his savings account on clothes. He bought \$50 worth of clothes.

Part A

Use the percent bar to model this situation.



Part B

Using the model from Part A, calculate the amount of money Rocco had in his account before buying the clothes.

Show your work.

Part C

Write and solve an equation to show how much money Rocco had in his savings account after he bought the clothes.

Show your work.

Answer _____

Go On

- 63** The student council set a goal of raising at least \$500 in flower sales. So far it has raised \$415.

Part A

Write an inequality to show how much more money, m , the student council needs to reach its goal.

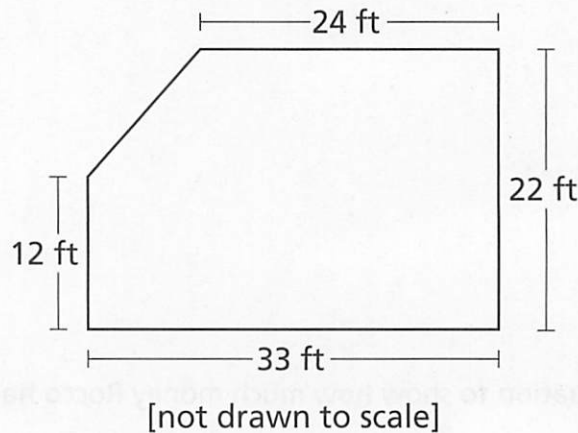
Answer _____

Part B

Graph the inequality on a number line.

Show your work.

- 64** The figure below shows Andrew's plan for a deck.



Part A

Draw dotted lines to decompose the shape into triangles and rectangles. Label the lengths of the sides of each figure needed to find the area.

Part B

Find the area of the deck.

Show your work.

Answer _____ square feet

Part C

It costs \$6 per square foot for the lumber to build the deck. What is the total cost?

Show your work.

Answer \$ _____

65

An appliance manufacturer recommends keeping the freezer set at -18°C .

Part A

What is $|-18|$?

Answer _____

Part B

Explain what the absolute value tells about -18°C ?

66

As part of a new fitness plan, Sabir runs on a treadmill at the same speed for 15 minutes every morning. The table shows the calories he burns over time.

Time (in minutes)	Number of Calories Burned
3	15
6	30
9	45
12	60

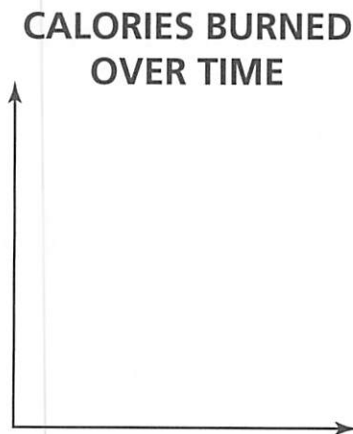
Part A

Write an equation to represent the relationship between the time Sabir runs and the number of calories he burns. Use x as the independent variable and y as the dependent variable.

Answer _____

Part B

Plot the points in the table on the graph shown below. Label the axes of the graph and choose an appropriate scale for each axis.

**Go On**

67 A train travels 210 miles in 3 hours at a constant speed.

Part A

Find the speed of the train in miles per hour. Use the following formula.

$$d = rt$$

Answer _____

Part B

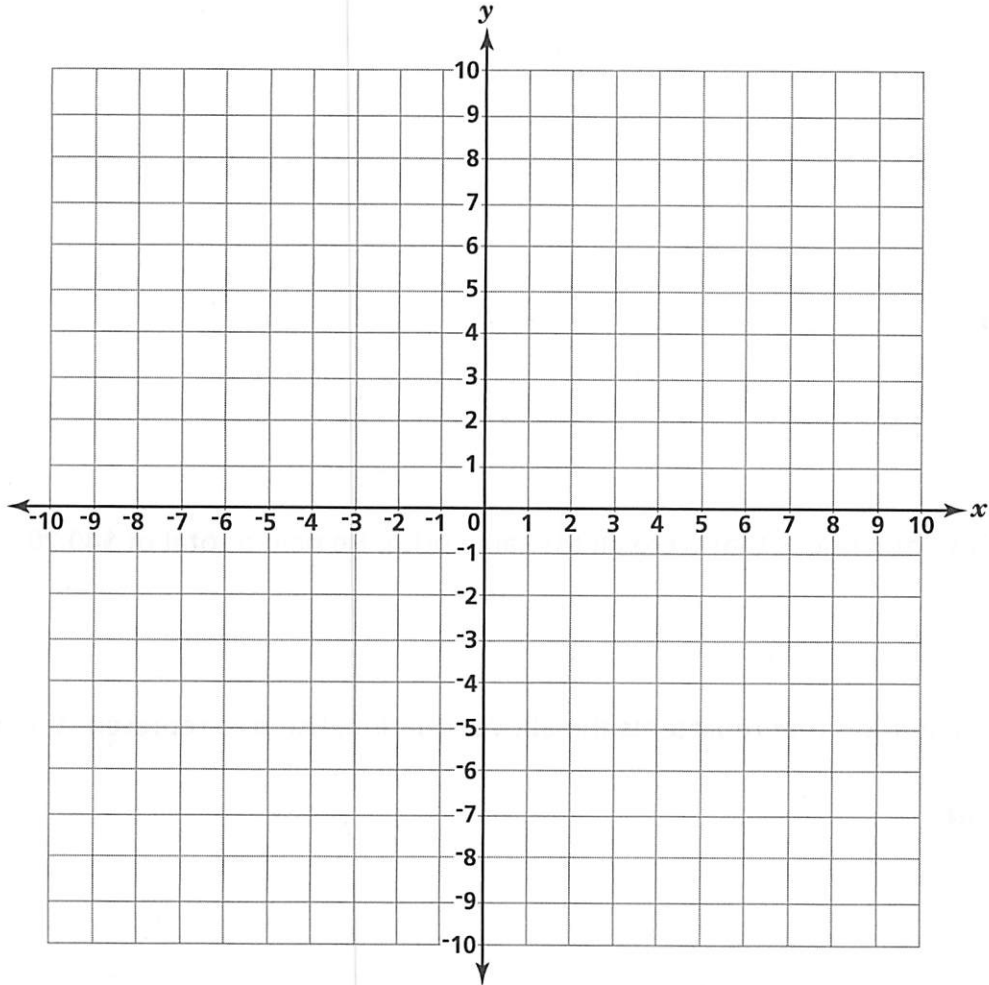
How long will it take the train to travel 350 miles at this speed?

Answer _____

Consider the coordinate grid below.

Part A

Plot the points $A\left(2\frac{1}{2}, 3\frac{1}{2}\right)$, $B\left(6, 3\frac{1}{2}\right)$, $C(6, 7)$, and $D\left(2\frac{1}{2}, 7\right)$ on the coordinate plane.



Part B

What shape is formed when the four points are connected to make a polygon? Justify your answer by finding the length of each side.

Show your work.

Answer _____

69

Kende bought 3 books that were all the same price. He paid a total of \$40.20.

Part A

Write an equation that represents the above situation. Use b to represent the price of a book.

Equation _____

Part B

What is the cost of one book?

Show your work.

Answer _____

STOP

Cut along the dotted line.

- Book 1**
1. A B C D
 2. A B C D
 3. A B C D
 4. A B C D
 5. A B C D
 6. A B C D
 7. A B C D
 8. A B C D
 9. A B C D
 10. A B C D
 11. A B C D
 12. A B C D
 13. A B C D
 14. A B C D
 15. A B C D
 16. A B C D

17. A B C D
 18. A B C D
 19. A B C D
 20. A B C D
 21. A B C D
 22. A B C D
 23. A B C D
 24. A B C D
 25. A B C D
 26. A B C D
 27. A B C D
 28. A B C D
 29. A B C D
 30. A B C D
- Book 2**
31. A B C D
 32. A B C D

33. A B C D
34. A B C D
35. A B C D
36. A B C D
37. A B C D
38. A B C D
39. A B C D
40. A B C D
41. A B C D
42. A B C D
43. A B C D
44. A B C D
45. A B C D
46. A B C D
47. A B C D
48. A B C D
49. A B C D

For numbers 61 through 69, write your answers in the book.

- Book 3**
50. A B C D
 51. A B C D
 52. A B C D
 53. A B C D
 54. A B C D
 55. A B C D
 56. A B C D
 57. A B C D
 58. A B C D
 59. A B C D
 60. A B C D

Practice Test 2

- Book 1**
1. A B C D
 2. A B C D
 3. A B C D
 4. A B C D
 5. A B C D
 6. A B C D
 7. A B C D
 8. A B C D
 9. A B C D
 10. A B C D
 11. A B C D
 12. A B C D
 13. A B C D
 14. A B C D
 15. A B C D
 16. A B C D

17. A B C D
 18. A B C D
 19. A B C D
 20. A B C D
 21. A B C D
 22. A B C D
 23. A B C D
 24. A B C D
 25. A B C D
 26. A B C D
 27. A B C D
 28. A B C D
 29. A B C D
 30. A B C D
- Book 2**
31. A B C D
 32. A B C D

33. A B C D
34. A B C D
35. A B C D
36. A B C D
37. A B C D
38. A B C D
39. A B C D
40. A B C D
41. A B C D
42. A B C D
43. A B C D
44. A B C D
45. A B C D
46. A B C D
47. A B C D
48. A B C D
49. A B C D

For numbers 61 through 69, write your answers in the book.

- Book 3**
50. A B C D
 51. A B C D
 52. A B C D
 53. A B C D
 54. A B C D
 55. A B C D
 56. A B C D
 57. A B C D
 58. A B C D
 59. A B C D
 60. A B C D

Practice Test 1

Name _____
 Teacher _____
 City _____

Book 1

- 1. A B C D
- 2. A B C D
- 3. A B C D
- 4. A B C D
- 5. A B C D
- 6. A B C D
- 7. A B C D
- 8. A B C D
- 9. A B C D
- 10. A B C D
- 11. A B C D
- 12. A B C D
- 13. A B C D
- 14. A B C D
- 15. A B C D
- 16. A B C D

Book 2

- 17. A B C D
- 18. A B C D
- 19. A B C D
- 20. A B C D
- 21. A B C D
- 22. A B C D
- 23. A B C D
- 24. A B C D
- 25. A B C D
- 26. A B C D
- 27. A B C D
- 28. A B C D
- 29. A B C D
- 30. A B C D
- 31. A B C D
- 32. A B C D

Book 3

- 33. A B C D
- 34. A B C D
- 35. A B C D
- 36. A B C D
- 37. A B C D
- 38. A B C D
- 39. A B C D
- 40. A B C D
- 41. A B C D
- 42. A B C D
- 43. A B C D
- 44. A B C D
- 45. A B C D
- 46. A B C D
- 47. A B C D
- 48. A B C D
- 49. A B C D

For numbers 61 through 69, write your answers in the book.

Practice Test 3

Ready New York—Mathematics Practice, Grade 6 Answer Form

Name _____

Teacher _____

Grade _____

City _____

School _____

Cut along the dotted line.



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