SpiralEd Solutions

6th Grade Spirals

SpiralEd Solutions
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SpiralEd Solutions

Spiral 1

1 (6.2B)

Which of the following statements is true?

A The opposite of -27 is -27, and its absolute value is 27.

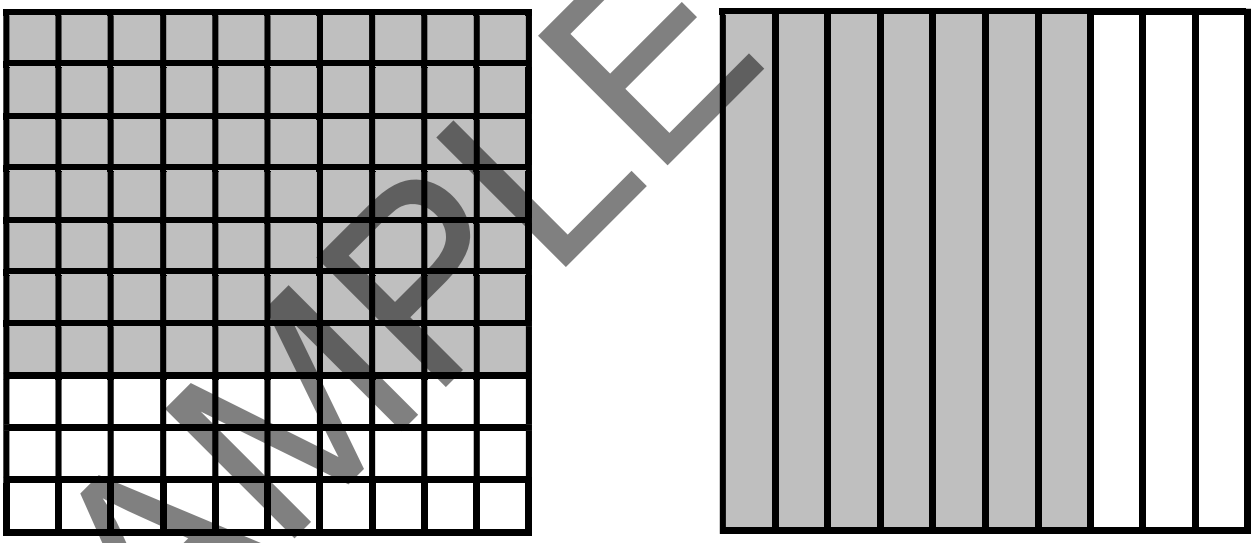
B The opposite of 56 is -56, and its absolute value is -56.

C The opposite of -24 is -24, and its absolute value is 24.

D The opposite of 43 is -43, and its absolute value is 43.

2 (6.5C)

The shaded areas show equal parts of the same whole.



Which equality correctly represents the shaded areas?

F 0.70 = 0.7

G 0.70 = 7.0

H 7.0 = 7.0

J $\frac{7}{100} = \frac{70}{10}$

3 (6.2C)

A student placed the following points on a number line.

- Point M at $\frac{57}{10}$.
- Point N at $\frac{51}{8}$.
- Point P at $\frac{3}{20}$.
- Point Q at $\frac{65}{9}$.

Which point is NOT correctly place on this number line?

A Point M

B Point N

C Point P

D Point Q

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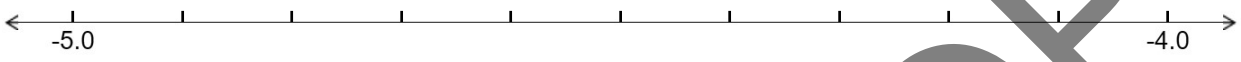
Spiral 2

1 (6.2C)

A student correctly labels the numbers -4.76, $-4\frac{2}{3}$, $-4\frac{7}{8}$, and -4.57 on the number line below.



Which number will be located closest to -5.0?

F -4.76

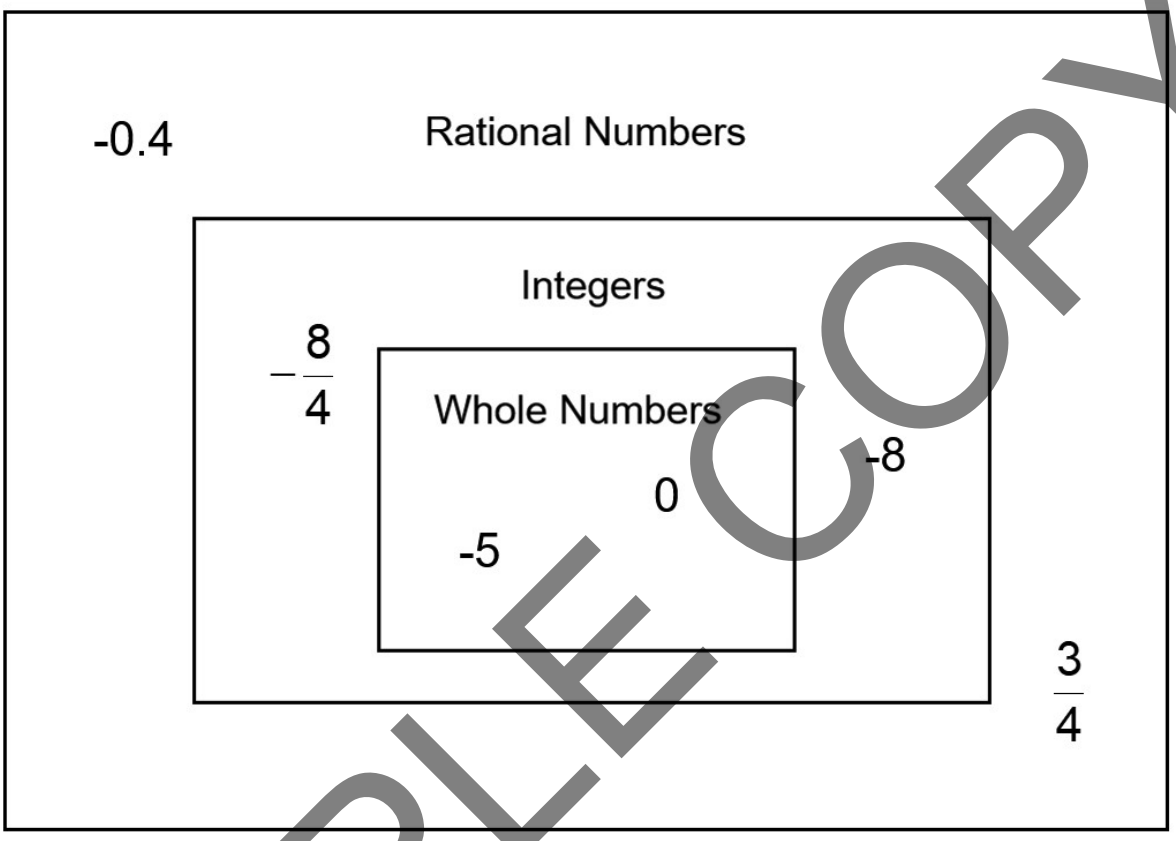
G $-4\frac{2}{3}$

H $-4\frac{7}{8}$

J -4.57

2 (6.2A)

Which number is NOT in the correct location?



A -5

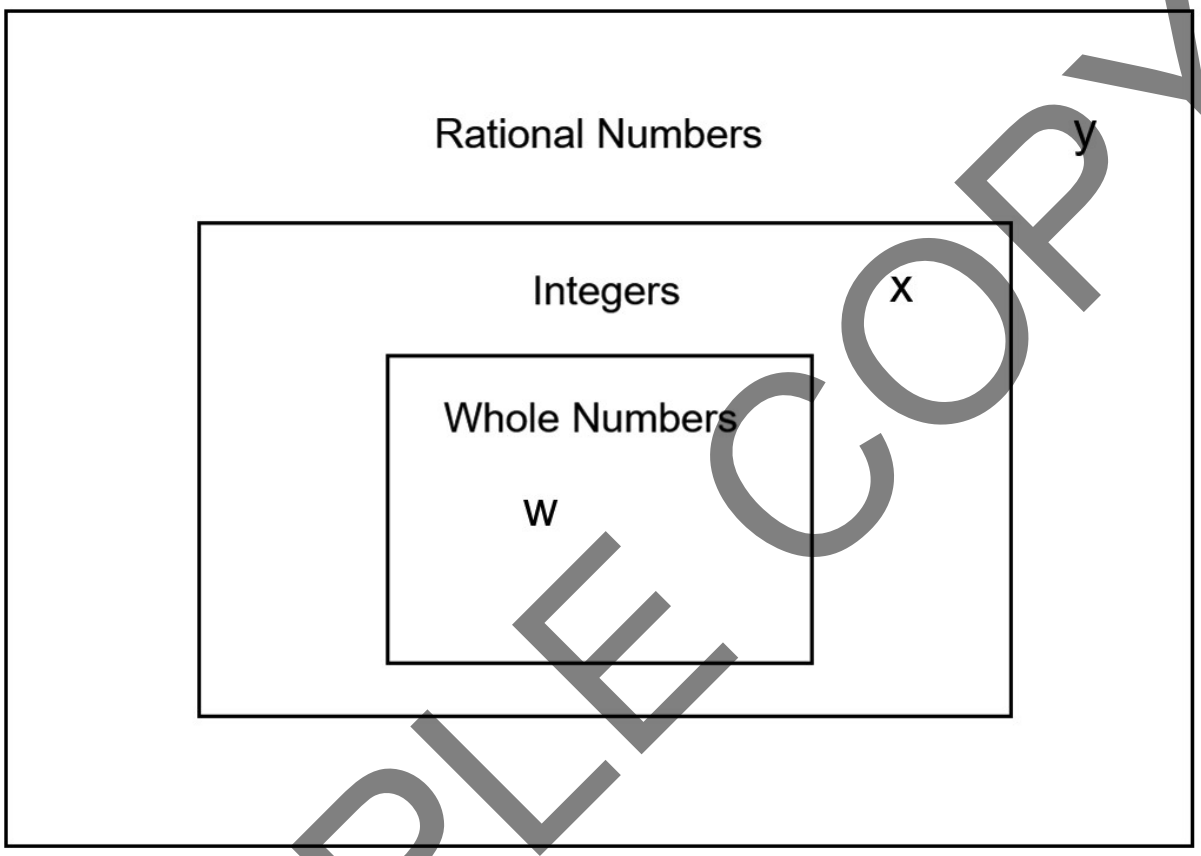
B 0

C $\frac{3}{4}$

D $-\frac{8}{4}$

3 (6.2A)

Which letter represents the correct location for π ?



F w

G x

H y

J The number does not belong in this graphic.

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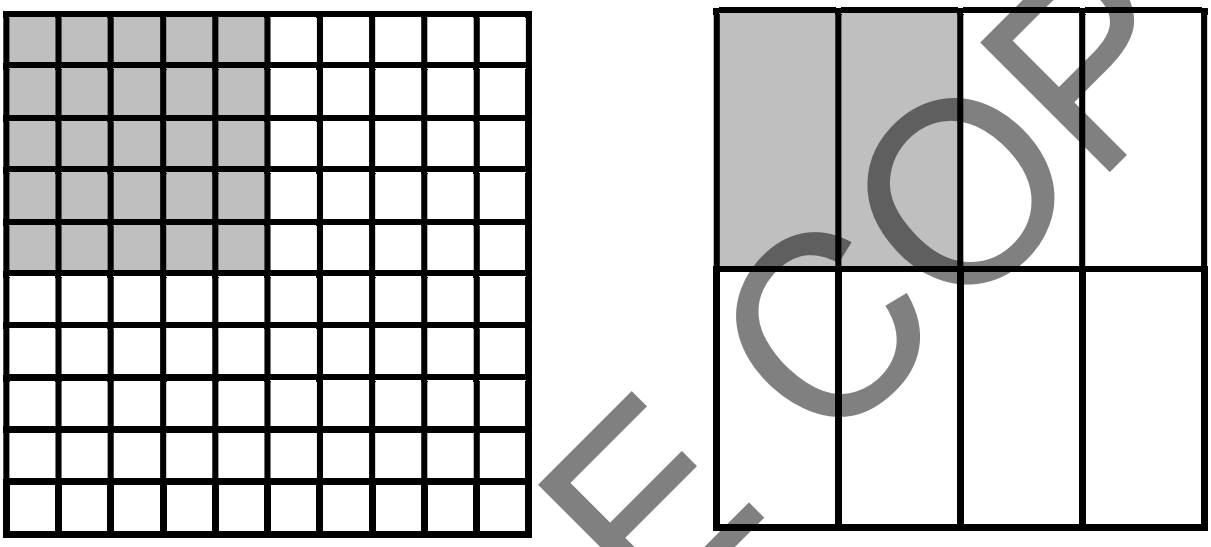
Spiral 3

1 (6.5C)

The shaded areas show equal parts of the same whole.



Which equality correctly represents the shaded areas?

A $0.25 = \frac{1}{8}$

B $25\% = \frac{2}{8}$

C $0.25 = \frac{1}{8}$

D $\frac{25}{100} = \frac{4}{8}$

2 (6.2D)

Students must complete 2 hours keyboard practice each week. The table shows the progress of four students.

Keyboard Practice

Name	Portion Complete
Emma	0.35
Liam	$\frac{4}{9}$
Olivia	42%
Noah	$\frac{3}{8}$

Which list shows the names of the students in order from the least amount of practice time to the greatest amount of practice time?

F Liam, Olivia, Noah, Emma

G Emma, Noah, Olivia, Liam

H Liam, Noah, Olivia, Emma

J Noah, Olivia, Liam, Emma

3 (6.2E)

Which of the following statements is NOT true?

A $\frac{5}{4} = 5\overline{)4}$

B $2\overline{)1} = 1 \div 2$

C $8 \div 5 = \frac{8}{5}$

D $\frac{6}{3} = 3\overline{)6}$

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Spiral 4

1 (6.2E)

Which of the following statements is NOT true?

F $\frac{25}{5} = 5\overline{)25}$

G $2\overline{)1} = 2 \div 1$

H $6 \div 5 = \frac{6}{5}$

J $\frac{9}{3} = 3\overline{)9}$

2 (6.2D)

The table shows the amount of time four students practice Spanish vocabulary on Tuesday.

Spanish Practice Times

Name	Time (hours)
Stella	1.6
Sam	$1\frac{5}{12}$
Skylar	$1\frac{5}{6}$
Sebastian	1.4

Which list shows the names of the students in order from the least amount of practice time to the greatest amount of practice time?

A Skylar, Stella, Sam, Sebastian

B Sebastian, Sam, Stella, Skylar

C Stella, Sam, Skylar, Sebastian

D Sebastian, Skylar, Sam, Stella

3 (6.2D)

Students must complete 16 hours of volunteer service each semester. The table shows the progress of four students after the first two months of school.

Volunteer Time Completed

Name	Portion Complete
Mason	$\frac{1}{2}$
Maddox	$\frac{3}{4}$
Miguel	$\frac{7}{8}$
Marcus	$\frac{5}{16}$

Which list shows the amount of volunteer time completed in order from greatest to least?

F $\frac{7}{8}, \frac{3}{4}, \frac{1}{2}, \frac{5}{16}$

G $\frac{3}{4}, \frac{7}{8}, \frac{5}{16}, \frac{1}{2}$

H $\frac{5}{16}, \frac{1}{2}, \frac{3}{4}, \frac{7}{8}$

J $\frac{1}{2}, \frac{3}{4}, \frac{7}{8}, \frac{5}{16}$

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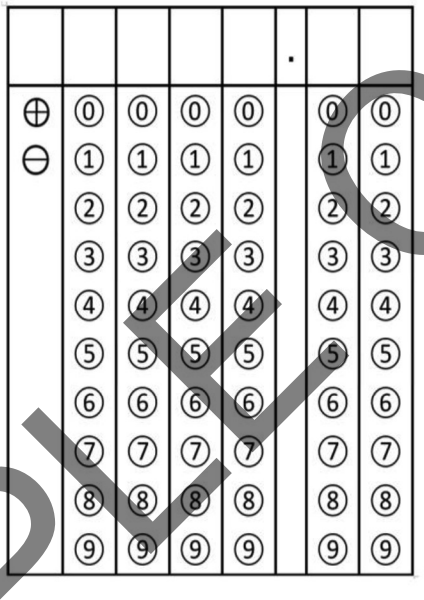
Spiral 5

1 (6.3E)

Jasmine has \$28.80 in savings. Her sister has $2\frac{1}{2}$ as much as Jasmine. How much money do the two girls have together?

Record your answer and fill in the bubbles. Be sure to use the correct place value.



2 (6.3E)

A cookie recipe calls for $2\frac{2}{3}$ cups of flour. For the school bake sale Mrs. James makes $4\frac{1}{2}$ recipes of cookies. How much flour does she use?

F $11\frac{3}{4}$

G 12

H $11\frac{2}{3}$

J $12\frac{1}{3}$

3 (6.3E)

Randall earns $245.50 mowing lawns. He puts $\frac{1}{5}$ of his money in savings and uses the rest to buy clothes for school. How much money does he have for school clothes?

A $49.10

B $294.60

C $196.40

D 189.50

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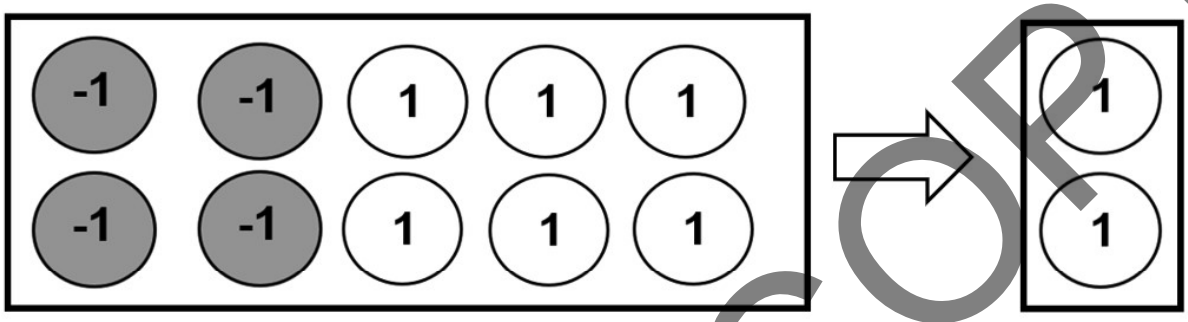
Spiral 6

1 (6.3C)

The diagram below is pictured in Kyle's math textbook.



The diagram models which equation?

F $-4 + 6 = 2$

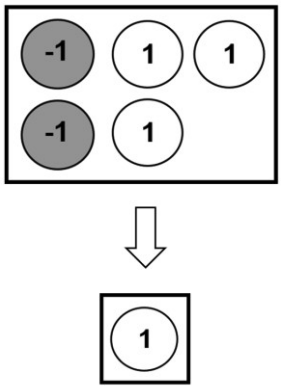
G $-6 + 4 = -2$

H $-4 \times 6 = -2$

J $-6 - (-4) = 2$

2 (6.3C)

Trent sketches the diagram below to model a math equation.



The diagram models which equation?

A $-2-3=1$

B $-2+3=1$

C $2-3=-1$

D $-2\times 3=1$

3 (6.3D)

Which expression has a value of 6?

F $3\times(-2)+8-(-4)$

G $3+(-2)\times 8+(-4)$

H $3-(-2)\times 8-(-4)$

J $3\times 2-8\div(-4)$

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Spiral 7

1 (6.3D)

Which expression has a value of 34?

A $5 \times 9 + (-6) \div (-2)$

B $4 \times 8 - (-6) \div 3$

C $-3 \times 8 - (5 - 12)$

D $(-2 + 8) \times (-4 + 3)$

2 (6.2D)

Students must read 200 pages per week. The table shows the progress of 4 students.

Reading Practice

Name	Portion Complete
Lucas	65%.
Sophia	$\frac{3}{4}$
Mason	$\frac{2}{3}$
Mia	62.5%

Which list shows the names of the students in order of reading progress from least to greatest?

F Mia, Mason, Lucas, Sophia

G Mia, Lucas, Mason, Sophia

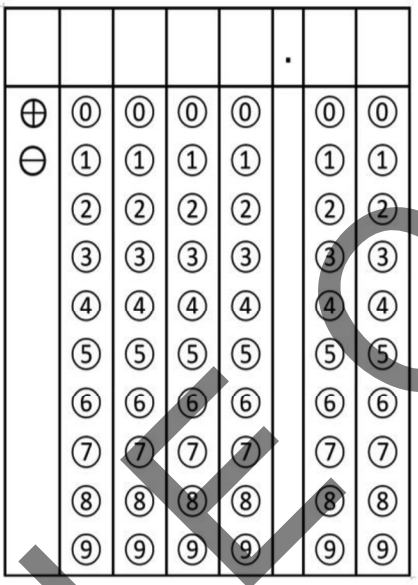
H Sophia, Lucas, Mason, Mia

J Sophia, Mason, Lucas, Mia

3 (6.3E)

Elizabeth buys 50 meters of ribbon to make bows for the cheer squad. Each bow uses 1.3 meters of ribbon. How many bows can Elizabeth make?

Record your answer and fill in the bubbles. Be sure to use the correct place value.



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Spiral 8

1 (6.3A)

A designer has $3\frac{7}{8}$ yards of fabric to make into banners that each require $\frac{3}{16}$ of a yard of fabric. The designer will use the expression shown to determine how many banners she can make.

$$\frac{31}{8} \div \frac{3}{16}$$

Which expression can also be used to calculate the number of banners that can be cut from the fabric?

F $\frac{31}{8} \cdot \frac{16}{3}$

G $\frac{31}{8} \cdot \frac{3}{16}$

H $\frac{3}{16} \div \frac{31}{8}$

J $\frac{31}{8} \div \frac{16}{3}$

2 (6.3A)

A builder has a 16-foot sheet of plywood that he needs to cut into $\frac{1}{3}$ foot sections. The builder will use the expression shown to calculate the number of pieces that can be cut from the board.

$$16 \div \frac{1}{3}$$

Which expression can also be used to calculate the number of pieces that can be cut from the board?

A $16 \cdot \frac{1}{3}$

B $16 \cdot 3$

C $\frac{1}{3} \div 16$

D $16 \cdot (-\frac{1}{3})$

3 (6.3B)

Which statement about 12 multiplied by $\frac{5}{4}$ must be true?

F The product is greater than 12.

G The product is less than $\frac{5}{4}$.

H The product is equal to 12 multiplied by the reciprocal of $\frac{5}{4}$.

J The product is less than 12.

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Spiral 9

1 (6.3B)

A student multiplies a number by each of the numbers below. Which number will result in a product less than the original number?

$\frac{5}{4}$ $\frac{7}{8}$ $\frac{6}{5}$ $\frac{3}{2}$

A $\frac{5}{4}$ **B** $\frac{7}{8}$ **C** $\frac{6}{5}$ **D** $\frac{3}{2}$

2 (6.2D)

The table shows six students times for a 200-meter race.

200-meter Times

Name	Time (hours)
Daniel	22.18 sec
David	21.45 sec
Dennison	22.24 sec
DJ	22.5 sec
Dillon	21.98 sec
Drew	22.03 sec

Who won?

F Dillon **G** Drew

H David **J** Dennison

3 (6.3D)

Which expression has a value of 2?

A $3 \times (-2) + 8 - (-4)$

B $(-2 + 8) \times (-4 + 3)$

C $4 \times 8 - (-6) \div 3$

D $(-6 + 5) \times (-4 \div 2)$

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Spiral 10

1 (6.3D)

A teacher wrote this expression on the board.

$$5 \times (-3 + 5) - (-4)$$

What is the value of the expression?

F 44

G -4

H 18

J 14

2 (6.4C)

Jason has 3 red pencils and 6 yellow pencils. Which statement is true?

A The number of red pencils is $\frac{1}{2}$ times the number of yellow pencils.

B The number of red pencils is 2 times the number of yellow pencils.

C The number of yellow pencils is $\frac{1}{2}$ times the number of red pencils.

D The number of red pencils is 3 more than the number of yellow pencils.

3 (6.4C)

A bag of 24 buttons contains

- 6 red buttons
- 12 blue buttons
- 2 yellow buttons
- 4 green buttons

Which statement is true?

F The number of blue buttons is 2 times the number of green buttons.

G The number of red buttons is $\frac{1}{4}$ times the number of blue buttons.

H The number of yellow buttons is $\frac{1}{6}$ times the number of blue buttons.

J The number of blue buttons is 3 times the number of red buttons.

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Spiral 11

1 (6.4D)

Austin completes his reading assignment in 20 minutes. During that time, he reads 36 pages of his book. What is Austin's reading rate in pages per minute?

A 1.8 pages per minute

B 5.6 pages per minute

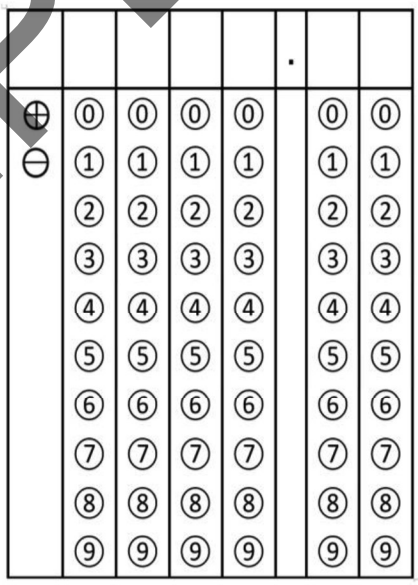
C 55.6 pages per minute

D 18 pages per minute

2 (6.4D)

A truck driver travels 870 miles, driving $14\frac{1}{2}$ hours. What is his average speed in miles per hour?

Record your answer and fill in the bubbles. Be sure to use the correct place value.



3 (6.4D)

A high efficiency car travels 624 miles on 12 gallons of gas. What is the car's rate of gas consumption in miles per gallon?

A 51.2 miles per gallon

B 48 miles per gallon

C 52 miles per gallon

D 61 miles per gallon

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Spiral 12

1 (6.4B)

A bag of 24 buttons contains

- 6 red buttons
- 12 blue buttons
- 2 yellow buttons
- 4 green buttons

What is the ratio of red buttons to yellow buttons?

F 1:3

G 1:2

H 4:1

J 3:1

2 (6.3A)

Which statement is true?

A $\frac{3}{4} \div \frac{1}{3} = \frac{3}{4} \bullet \frac{1}{3} = \frac{1}{4}$

B $\frac{1}{5} \div \frac{2}{3} = \frac{2}{3} \bullet \frac{1}{5} = \frac{2}{15}$

C $\frac{5}{8} \div \frac{1}{4} = \frac{5}{8} \bullet \frac{4}{1} = \frac{5}{2}$

D $\frac{3}{5} \div 4 = \frac{3}{5} \bullet \frac{4}{1} = \frac{12}{5}$

3 (6.4B)

A set of pattern blocks contains

- 20 hexagons
- 48 squares
- 60 equilateral triangles
- 36 trapezoids

What is the ratio of squares to trapezoids?

F 3:4

G 4:3

H 12:19

J 2:1

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Spiral 13

1 (6.4B)

The prices for different sizes of ketchup are shown in the table.

Size	Cost
16 oz.	$1.29
20 oz.	$1.77
36 oz.	$2.49
48 oz.	$4.69

Which amount is the best buy?

A 16 oz.

B 20 oz.

C 36 oz.

D 48 oz.

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2 (6.2D)

Which list shows the temperatures in order from coldest to warmest in degrees Celsius?

F -2^0C, -12^0C, 21^0C, 2^0C, 12^0C

G -12^0C, -2^0C, 2^0C, 12^0C, 21^0C

H 21^0C, 12^0C, 2^0C, -2^0C, -12^0C

J -12^0C, -2^0C, 12^0C, 2^0C, 21^0C

3 (6.3E)

Miguel's car gets an average of 31.5 miles per gallon. He plans a trip from San Antonio to Dallas, which is 270.9 miles. How many gallons of gas will he use?

Record your answer and fill in the bubbles. Be sure to use the correct place value.

					.		
⊕	0	0	0	0		0	0
⊖	1	1	1	1		1	1
	2	2	2	2		2	2
	3	3	3	3		3	3
	4	4	4	4		4	4
	5	5	5	5		5	5
	6	6	6	6		6	6
	7	7	7	7		7	7
	8	8	8	8		8	8
	9	9	9	9		9	9

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Spiral 14

1 (6.4A)

Which statement describes the relationship between *x* and *y* in these two equations?

$$y = -4x$$
$$y = x - 4$$

F In $y = -4x$ the value of *y* is -4 times the value of *x*, and in $y = x - 4$ the value of *y* is four less than the value of *x*.

G In $y = -4x$ the value of *y* is 4 less than the value of *x*, and in $y = x - 4$ the value of *y* is four times the value of *x*.

H In $y = -4x$ the value of *y* is -4 times the value of *x*, and in $y = x - 4$ the value of *y* is four more $-\frac{1}{4}$ than the value of *x*.

J In $y = -4x$ the value of *y* is -4 times the value of *x*, and in $y = x - 4$ the value of *y* is the value of four minus the value of *x*.

2 (6.3D)

The temperature at sunrise was -5^0C. At 8:00 AM the temperature had risen 6 degrees. At noon the temperature had risen 4 more degrees. A cold front pushed through in the afternoon, dropping the temperature 8 degrees in one hour. Before sunset the temperature rose two degrees. What was the temperature at sunset?

A -3^0C

B -2^0C

C 1^0C

D -1^0C

3 (6.4A)

Look at the table below.

x	-3	-2	-1	0	1
y	2	3	4	5	6

Which statement is true about the data in the table?

F The value of *y* can be represented by a function in the form $y = ax$, because each *y*-value is *a* times as large as the corresponding *x*-value.

G The value of *y* can be represented by a function in the form $y = x + a$, because each *y*-value is *a* more than the corresponding *x*-value.

H The value of *y* can be represented by a function in the form $y = ax$, because each *y*-value is *a* more than the corresponding *x*-value.

J The value of *y* can be represented by a function in the form $y = x + a$, because each *y*-value is *a* times as large as the corresponding *x*-value.

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Spiral 15

1 (6.4C)

A pet store has

- 2 rabbits
- 18 white mice
- 12 gerbils
- 6 hamsters

Which statement is NOT true?

A The number of white mice is 9 times the number of rabbits.

B The number of hamsters is half the number of white mice.

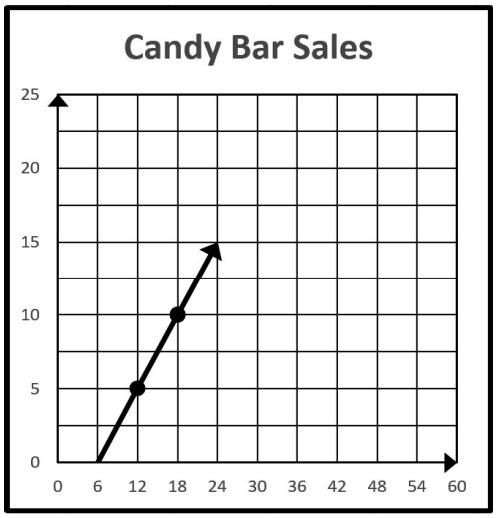
C The number of hamsters is 3 times the number of rabbits.

D The number of gerbils is twice the number of hamsters.

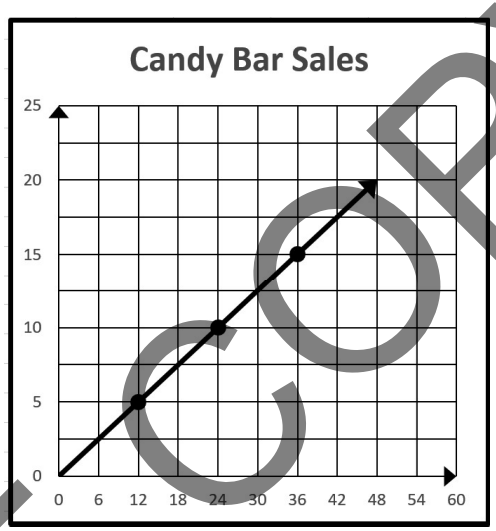
2 (6.5A)

The school band earns $5 for every dozen candy bars sold. Which graph models a relationship with the same proportion, showing earnings per number of bars sold?

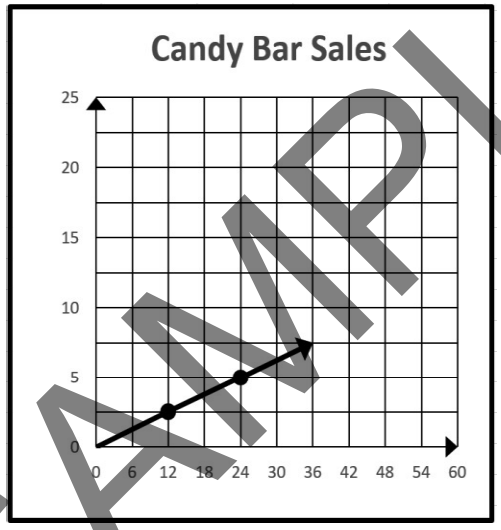
F



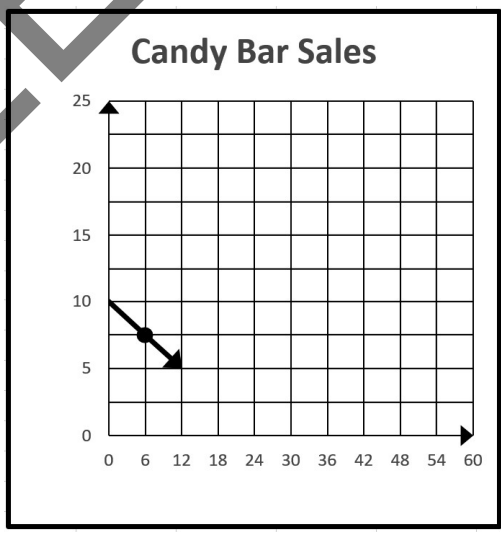
G



H



J



3 (6.5A)

To create orange frosting for Halloween cookies, a baker mixes 5 drops of red food coloring to every 3 drops of yellow. Which table shows the possible values of *r*, the number of drops of red food coloring the baker uses, and *y*, the number of drops of yellow coloring?

A

red drops (*r*)	yellow drops (*y*)
5	3
10	6
15	9

B

red drops (*r*)	yellow drops (*y*)
5	3
6	4
7	5

C

red drops (*r*)	yellow drops (*y*)
5	3
25	9
125	27

D

red drops (*r*)	yellow drops (*y*)
5	3
4	4
3	5

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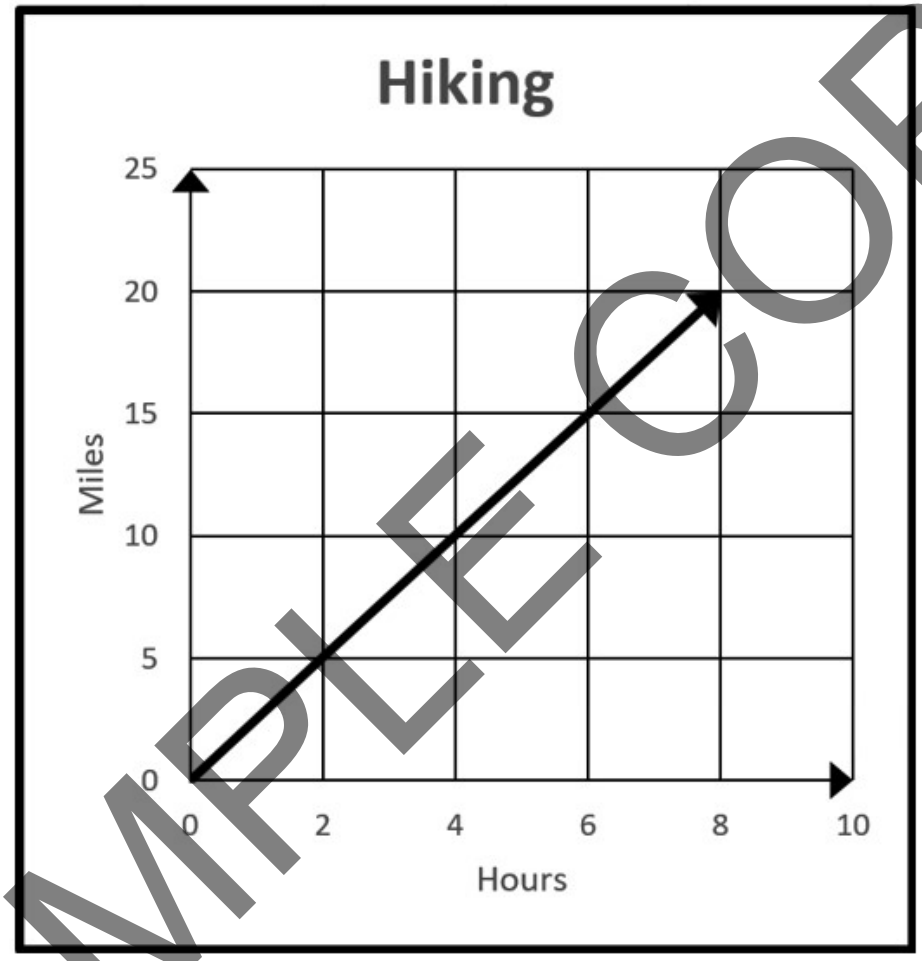
Spiral 16

1 (6.5A)

The graph shows the relationship between the amount of time spent hiking and the distance travelled.



Using the information in the graph, which statement is true?

F The hiker travels two miles every five hours.

G The hiker travels five miles every two hours.

H The hiker travels at a rate of two miles per hour.

J The hiker travels 15 miles in four hours.

2 (6.4A)

Which statement describes the relationship between *x* and *y* in these two equations?

$$y = 5x$$
$$y = x - 5$$

A In $y = 5x$ the value of *y* is 5 more than the value of *x*, and in $y = x - 5$ the value of *y* is five less than the value of *x*.

B In $y = 5x$ the value of y is 5 times the value of *x*, and in $y = x - 5$ the value of *y* is five less than the value of *x*.

C In $y = 5x$ the value of y is $\frac{1}{5}$ times the value of *x*, and in $y = x - 5$ the value of *y* is five less than the value of *x*.

D In $y = 5x$ the value of *y* is 5 times the value of *x*, and in $y = x - 5$ the value of *y* is five more than the value of *x*.

3 (6.4B)

In a design, the ratio of blue tiles to red tiles is 1:2. Which design fits this ratio? (R = red tile, B = blue tile)

F

R	B	R
B	R	B
B	R	B
R	B	R

G

R	B	B	R	B	B

H

R	B	R
R	B	R

J

R		R		R
	B		B	
R		R		R
	B		B	

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Spiral 17

1 (6.4H)

Jason ran 3.5 kilometers on Monday. What is this distance in meters?

A 3,500 m

B 350 m

C 0.35 m

D 0.035 m

2 (6.4B)

In a package of craft beads the ratio of green beads to blue beads is 1:3. Which package fits this ratio?

F
- 120 red
- 100 blue
- 30 green
- 24 orange
- 72 yellow

G
- 100 red
- 80 blue
- 24 green
- 20 orange
- 75 yellow

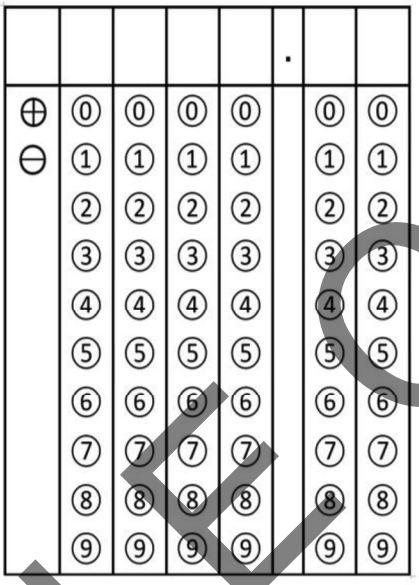
H
- 200 red
- 120 blue
- 30 green
- 20 orange
- 70 yellow

J
- 124 red
- 72 blue
- 24 green
- 20 orange
- 70 yellow

3 (6.4H)

Mrs. Hill buys 12 gallons of milk each week. How many quarts of milk does she buy?

Record your answer and fill in the bubbles. Be sure to use the correct place value.



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Spiral 18

1 (6.4H)

Evan threw a javelin 75 feet 8 inches. How many inches did Evan throw the javelin?

F 900 in.

G 233 in.

H 908 in.

J 758 in.

2 (6.4H)

A recipe calls for $4\frac{1}{2}$ cups of water. How many fluid ounces of water are in $4\frac{1}{2}$ cups?

A 4.5 fl. oz.

B 45 fl. oz.

C 72 fl. oz.

D 36 fl. oz.

3 (6.3D)

A meteorologist charted the temperature change in Antarctica every four hours over a 24-hour period in degrees Celsius. The table shows the changes he recorded.

Time	Change in Temperature
4:00 AM	-2 degrees
8:00 AM	+3 degrees
12:00 PM	+4 degrees
4:00 PM	-1 degree
8:00 PM	-3 degrees
12:00 AM	-2 degrees

If the beginning temperature was -30^0C what was the final temperature?

F -34^0C

G -33^0C

H -31^0C

J -30^0C

SpiralEd Solutions

Spiral 19

1 (6.3E)

Abby has $87.30. Her friend, Katia, has $\frac{2}{3}$ as much as Abby. How much more money does Abby have than Katia?

A $58.20

B $29.10

C $145.50

D $43.65

2 (6.4H)

A package weighs $7\frac{3}{4}$ pounds. How many ounces does the package weigh?

F 124 oz.

G 112 oz.

H 62 oz.

J 7.75 oz.

3 (6.4H)

A spool holds 296 centimeters of ribbon. How many meters of ribbon does the spool hold?

A 29.6 m

B 2.96 m

C 2,960 m

D 0.296 m

SpiralEd Solutions

Spiral 20

1 (6.4H)

Mrs. Johnson buys a turkey weighing 135 ounces. What is the weight of the turkey in pounds?

F 13 lbs. 5 oz.

G 16 lbs. 7 oz.

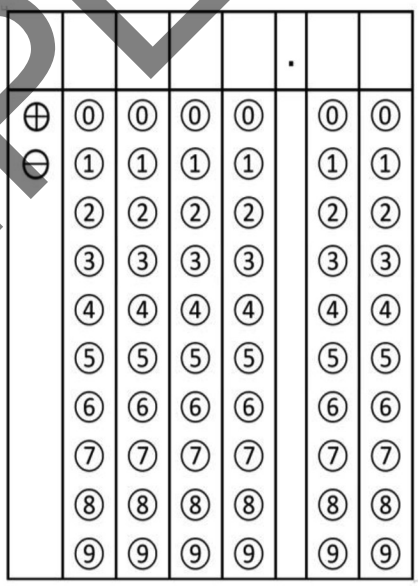
H 8 lbs. 7 oz.

J 9 lbs. 3 oz.

2 (6.3E)

A hiker averages 3.4 miles per hour. If he hikes 2 hours and 15 minutes, then takes a 30-minute break, and hikes another 3 hours and 30 minutes, how many miles does he travel?

Record your answer and fill in the bubbles. Be sure to use the correct place value.



3 (6.3D)

Which expression has a value of -28?

F $(-6+5)\times(-4\div 2)$

G $-6+5\times(-4)-2$

H $-6-5\times(-4)\times 2$

J $6\times 5\div((-4)+2)$

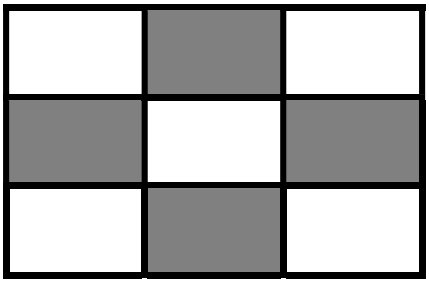
SpiralEd Solutions

Spiral 21

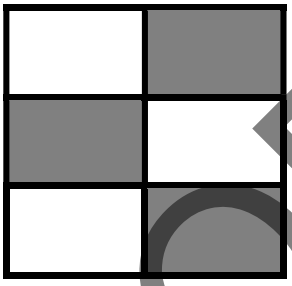
1 (6.4E)

Which model represents a ratio of 4 to 5 shaded to unshaded?

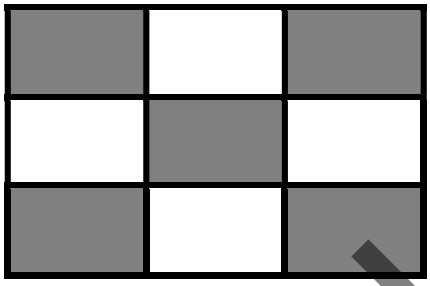
A



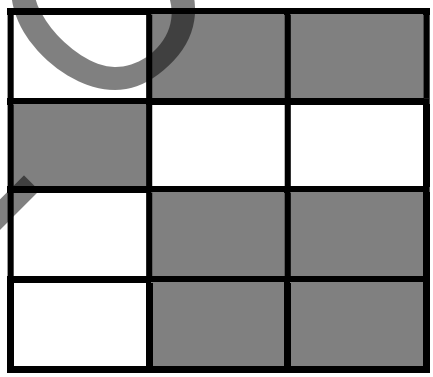
B



C



D



2 (6.4E)

Three out of every eight members of the choir are male. Which decimal represents this ratio?

F 3.75

G 0.375

H 37.5

J 0.0375

3 (6.4F)

This shaded model represents 100%.

What amount is represented by shaded portion of this model?

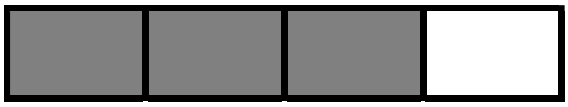
A 80% **B** 8% **C** 4% **D** 40%

SpiralEd Solutions

Spiral 22

1 (6.4F)

What percent and fraction are shaded in this model?



F 25% and $\frac{1}{4}$

G 75% and $\frac{3}{4}$

H 75% and $\frac{3}{1}$

J 66.7% and $\frac{2}{3}$

2 (6.2D)

Which list shows the interest rates in order from highest to lowest?

A 1.23%, 1.32%, 2.31%, 3.12%, 3.21%

B 2.31%, 1.32%, 3.12%, 3.21%, 1.23%

C 1.32%, 3.12%, 3.21%, 1.23%, 2.31%

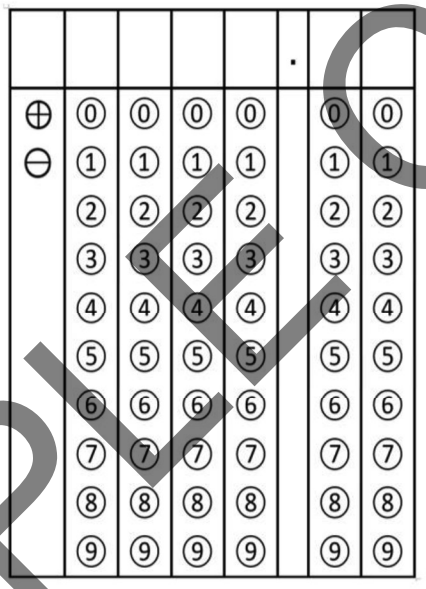
D 3.21%, 3.12%, 2.31%, 1.32%, 1.23%

3 (6.3E)

Amelia bakes bread for the holidays. Each loaf requires $2\frac{1}{2}$ teaspoons of yeast. Yeast comes in jars containing 142 servings of $\frac{1}{4}$ teaspoon of yeast.

How many loaves of bread can Amelia bake with one jar of yeast?

Record your answer and fill in the bubbles. Be sure to use the correct place value.



SpiralEd Solutions

Spiral 23

1 (6.3E)

A spool of thread contains 274 meters of thread. A manufacturer uses 3.25 meters of thread for each jacket produced. How many jackets can be made using one spool of thread?

A 84

B 85

C 843

D 8

2 (6.3D)

Which expression has the greatest value?

F $3 \times (-2) + 8 - (-4)$

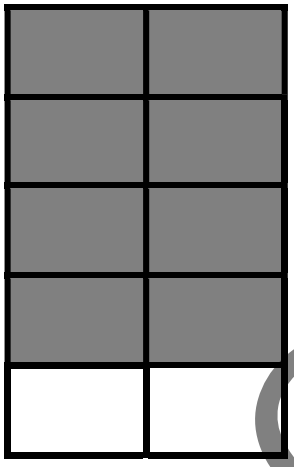
G $3 + (-2) \times 8 + (-4)$

H $3 - (-2) \times 8 - (-4)$

J $3 \times 2 - 8 \div (-4)$

3 (6.4E)

The shaded area of the model represents the number of sixth graders taking art as an elective out of the total number of sixth graders.



What percent of sixth graders take art?

A 20%

B 40%

C 80%

D 25 %

SpiralEd Solutions

Spiral 24

1 (6.2D)

Which list shows the numbers in order from least to greatest?

F $-\frac{2}{5}, -\frac{1}{2}, 0, -0.3$

G $-\frac{1}{2}, -0.3, 0, \frac{2}{5}$

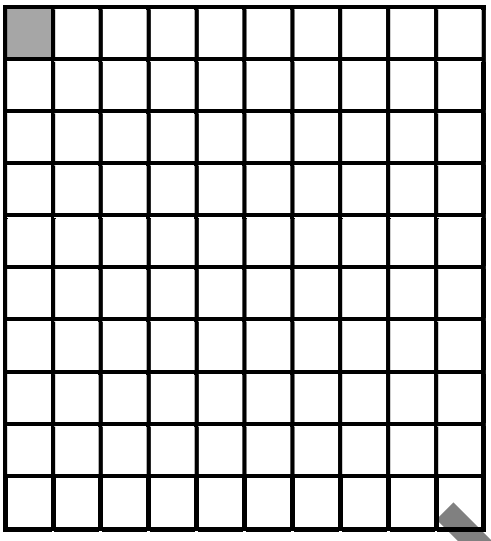
H $-\frac{2}{5}, 0, -\frac{1}{2}, -0.3$

J $0, -\frac{1}{2}, -0.3, -\frac{2}{5}$

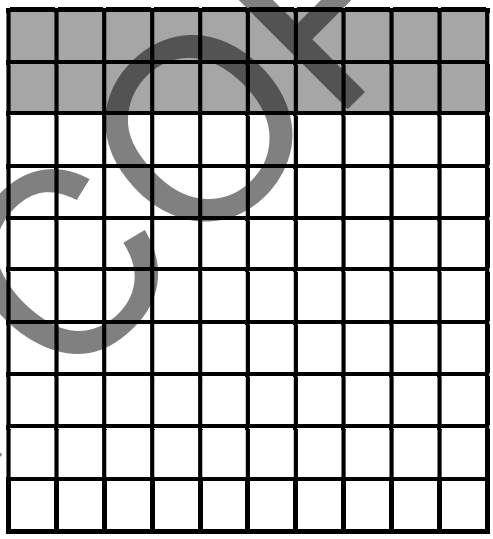
2 (6.4F)

Edgar completes $\frac{1}{10}$ of his sit ups in PE. Which shaded model represents this amount as a percent?

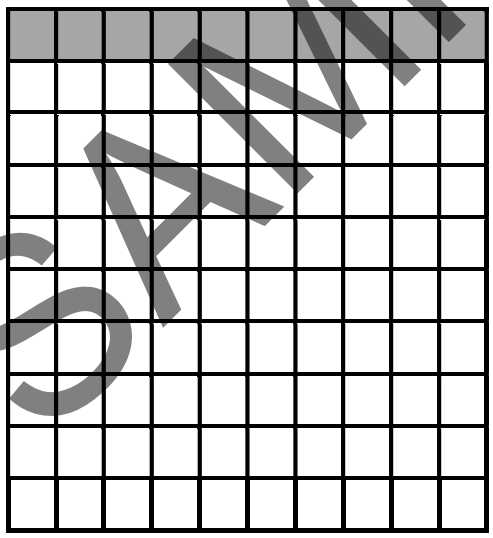
A



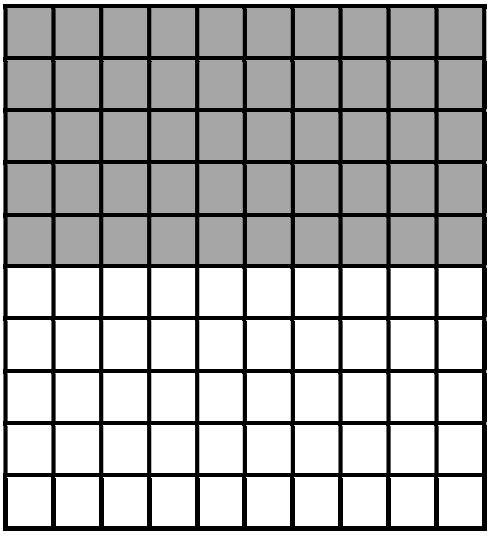
B



C



D



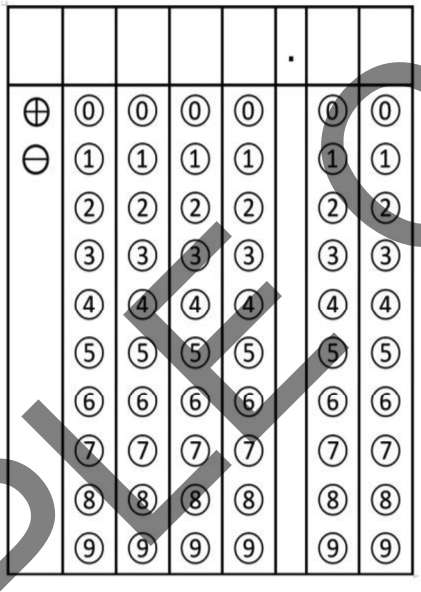
3 (6.3D)

A teacher wrote this expression on the board.

$$(-3-5)\div(-4)+11$$

What is the value of the expression?

Record your answer and fill in the bubbles. Be sure to use the correct place value.



SpiralEd Solutions

Spiral 25

1 (6.4B)

The prices for different sizes of soda are shown in the table.

Size	Cost
16 oz.	$.79
20 oz.	$1.19
36 oz.	$1.59
48 oz.	$1.77

Which amount is the best buy?

A 16 oz.

B 20 oz.

C 36 oz.

D 48 oz.

2 (6.2C)

A student placed the following points on a number line.

Point M at $\frac{17}{3}$.

Point N at $\frac{25}{4}$.

Point P at $\frac{34}{5}$.

Point Q a t$\frac{65}{11}$.

Which point is NOT correctly place on this number line?

F Point M

G Point N

H Point P

J Point Q

3 (6.4H)

A pitcher will hold 7,254 milliliters of liquid. How many liters will the pitcher hold?

A 72.54 L

B 725.4 L

C 7.254 L

D 0.7254 L

SpiralEd Solutions

Spiral 26

1 (6.7B)

Which of the following can be represented as an equation?

F the product of nine and seven decreased by four

G the product of nine and three is two more than five squared

H nine more than twice a number

J seven times fifteen increased by eight

2 (6.4H)

Kyle ran $3\frac{1}{2}$ miles in practice. How many yards did Kyle run?

A 5,280 yds.

B 18,480 yds.

C 1,848 yds.

D 6,160 yds.

3 (6.7B)

Which of the following is an expression?

F the square of six divided by four increased by five

G six increased by two is three more than twelve decreased by seven

H nine divided by three is two increased by one

J the product of eight and six is twice twenty-four

Spiral 27

1 (6.7C)

Which pair of expressions is equivalent?

A $2(-3x-4)+3$ and $-6x-5$

B $2(-3x-4)+3$ and $-6x-2$

C $2(-3x-4)+3$ and $6x-2$

D $2(-3x-4)+3$ and $6x+5$

2 (6.4B)

Water drains from a swimming pool at a rate of 240 gallons per hour. At this rate, how many gallons will drain in 15 minutes?

F 3.75 gallons

G 60 gallons

H 18 gallons

J 3600 gallons

3 (6.7B)

Which of the following is an expression?

A $10x = 80$

B $x - 5 = 12$

C $(10x + 15) \div 2$

D $-21 = x - 15$

Spiral 28

SpiralEd Solutions

1 (6.7C)

Which pair of expressions is equivalent?

F $\frac{1}{3}(6x-12)+2x$ and $-4x+2$

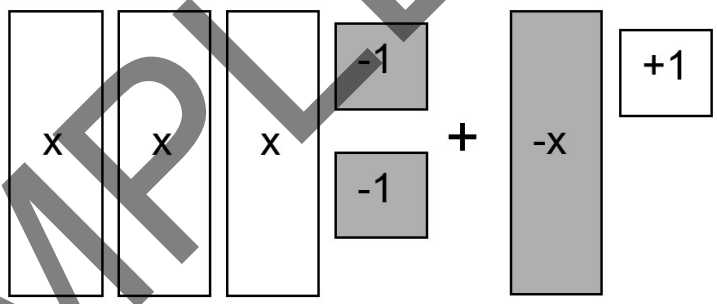
G $\frac{3}{4}(8x-12)-x$ and $5x-9$

H $\frac{1}{2}(4x+6)-2x+3$ and $4x+9$

J $-7-\frac{2}{5}(5x-15)$ and $2x+1$

2 (6.7C)

Which expression is equivalent to the model shown?



A $\frac{1}{2}(4x-6)+2$

B $2(x+1)+3$

C $\frac{1}{2}(4x+6)-2$

D $\frac{2}{3}(-6x+2)-3$

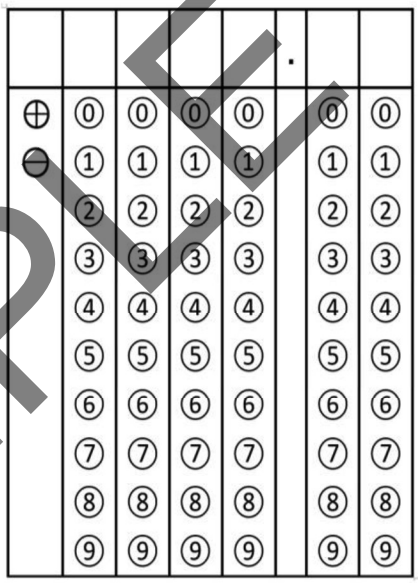
3 (6.4B)

A bag contains red, blue, green, and yellow marbles. Fourteen marbles are drawn from the bag.

- 4 red
- 3 blue
- 5 green
- 2 yellow

If the bag contains 70 marbles, predict how many of them are blue or yellow.

Record your answer and fill in the bubbles. Be sure to use the correct place value.



SpiralEd Solutions

Spiral 29

1 (6.2D)

A student buys four different bolts for his construction project. Which list shows the sizes in order from least to greatest?

A $\frac{7}{8}, \frac{3}{4}, \frac{1}{2}, \frac{5}{16}$

B $\frac{3}{4}, \frac{7}{8}, \frac{5}{16}, \frac{1}{2}$

C $\frac{5}{16}, \frac{1}{2}, \frac{3}{4}, \frac{7}{8}$

D $\frac{1}{2}, \frac{3}{4}, \frac{7}{8}, \frac{5}{16}$

2 (6.3E)

A rectangle has an area of $14\frac{2}{5}$ square inches. If the length of the rectangle is $3\frac{1}{5}$ inches, what is the width?

F $4\frac{2}{5}$ inches

G $4\frac{1}{2}$ inches

H 4 inches

J 4.2 inches

3 (6.3E)

The dimensions of a rectangular courtyard are 6.8 meters by 9.5 meters. How many square meters of grass will it take to cover the courtyard?

A 6.46 square meters

B 59.2 square meters

C 64.6 square meters

D 592 square meters

SpiralEd Solutions

Spiral 30

1 (6.4B)

Water drains from a swimming pool at a rate of 28 gallons per minute. How many minutes will it take to drain a 1,260-gallon pool?

F 45 minutes

G 35,280 minutes

H 450 minutes

J 35.28 minutes

2 (6.2D)

The table shows the average gasoline use in miles per gallon for five models of high efficiency vehicles. Which car gets the best gas mileage?

Gas Consumption

Car	Miles per Gallon
A	54.3 mpg
B	43 mpg
C	53.4 mpg
D	35 mpg
E	45.31 mpg

A Car A

B Car D

C Car E

D Car B

3 (6.3B)

A student multiplies a number by each of the numbers below. Which number will result in a product greater than the original number?

$\frac{4}{5}$ $\frac{7}{8}$ $\frac{6}{5}$ $\frac{2}{3}$

F $\frac{4}{5}$

G $\frac{7}{8}$

H $\frac{6}{5}$

J $\frac{2}{3}$

SpiralEd Solutions

Spiral 31

1 (6.4G)

James has a bag containing 12 cookies. He eats 9 of the cookies. What decimal is equivalent to the fraction of cookies James eats?

A 0.75

B 0.9

C 1.33

D 7.5

2 (6.3D)

Which expression has the least value?

F $-6+5\times(-4)-2$

G $3\times2-8\div(-4)$

H $(-2+8)\times(-4+3)$

J $4\times8-(-6)\div3$

3 (6.9A)

Coach told Gabriel he must run 36 miles each week. Gabriel plans to run five days out of each week. Which inequality can Gabriel use to determine how many miles, m, he must run each day to reach or exceed Coach's plan?

A $5m \geq 36$

B $7m \geq 36$

C $m \geq \frac{5}{36}$

D $5 \leq 36 - m$

SpiralEd Solutions

Spiral 32

1 (6.9A)

William has $10 to spend on lunch. He buys a hamburger for $4.85. Which inequality can William use to determine how much money, *m*, he has available to spend on other items?

F $4.85m \leq 10$ **G** $m + 4.85 \leq 10$

H $m + 4.85 \geq 10$ **J** $m - 4.8 \geq 10$

2 (6.4B)

A bag contains red, blue, green, and yellow marbles. Sixteen marbles are drawn from the bag.

- 4 red
- 4 blue
- 5 green
- 3 yellow

If the bag contains 96 marbles, predict how many of them are yellow.

A 20 **B** 21

C 24 **D** 18

3 (6.3D)

A teacher wrote this expression on the board.

$$6 \div (-3 + 5) + (-4)$$

What is the value of the expression?

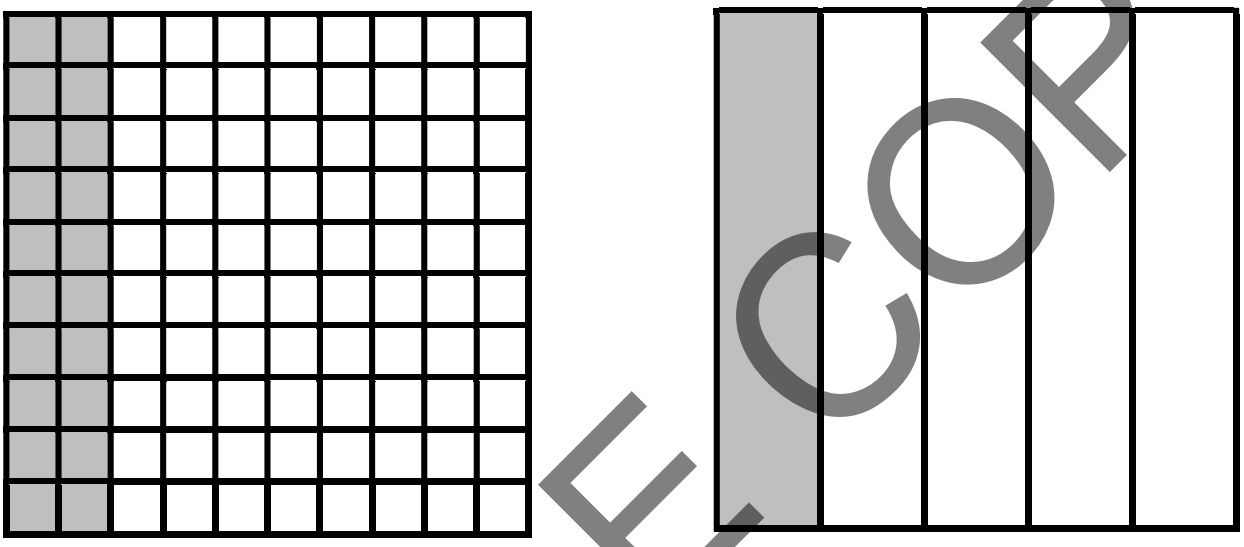
F 1 **G** -1 **H** -3 **J** -2

SpiralEd Solutions

Spiral 33

1 (6.5C)

The shaded areas show equal parts of the same whole.



Which equality does NOT represent the shaded areas?

A $\frac{20}{100} = \frac{1}{5}$

B $0.20 = \frac{1}{5}$

C $0.30 = \frac{1}{5}$

D $20\% = \frac{1}{5}$

2 (6.9C)

Hunter wrote the equation $\frac{x}{3} = 7$. Which situation is best represented by this equation?

F Hunter has *x* feet of rope. He converts the number of feet into yards.

G Hunter has *x* autographed baseballs. When his collection increases by 3, his total number of autographed baseballs is 7.

H If Hunter walks at a rate of 3mph, he takes x hours to walk 7 miles.

J Hunter has 7 sets of x number of books in each set. He divides the total number of books equally onto three shelves.

3 (6.9C)

Landon wrote the inequality $x + 8 \geq 15$. Which situation is best represented by this inequality?

A Landon has 8 fewer pieces of candy than his friend, Boston. Together the boys have at least 15 pieces of candy. How much candy, *x,* does Boston have?

B Landon has a bag of change containing at least 15 coins, all nickels or dimes. Eight of the coins are dimes. How many coins, *x*, are nickels?

C Landon runs 8 miles in x minutes. How many miles can he run in 15 minutes?

D Landon eats x pieces of pizza. His friend Boston eats 8 pieces. Together the boys eat 15 or fewer pieces of pizza.

SpiralEd Solutions

Spiral 34

1 (6.10A)

Aaliyah needs a rope that is at least 15 feet long. Which inequality represents all the possible lengths of rope in inches, x, that Aaliyah needs?

F $x \geq 180$

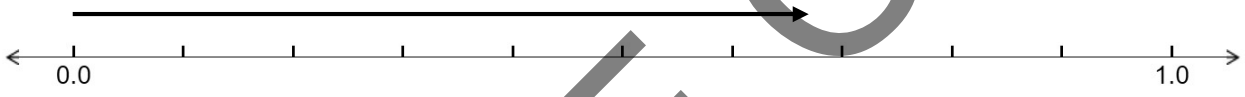
G $x \leq 180$

H $x \geq 15$

J $x \geq 5$

2 (6.4F)

The number line represents the amount of work completed on a school project.



Which fraction best represents this amount?

A $\frac{7}{10}$

B $\frac{6}{10}$

C $\frac{2}{3}$

D $\frac{3}{4}$

3 (6.10A)

Robert needs to score at least an 85 on his math test. Which inequality represents all the possible scores, x, that Robert needs?

F $x > 85$

G $x < 85$

H $x \geq 85$

J $x \leq 85$

SpiralEd Solutions

Spiral 35

1 (6.4H)

Angelina swam $4\frac{1}{2}$ miles in practice. How many feet did Angelina swim?

A 23,760 ft.

B 7,920 ft.

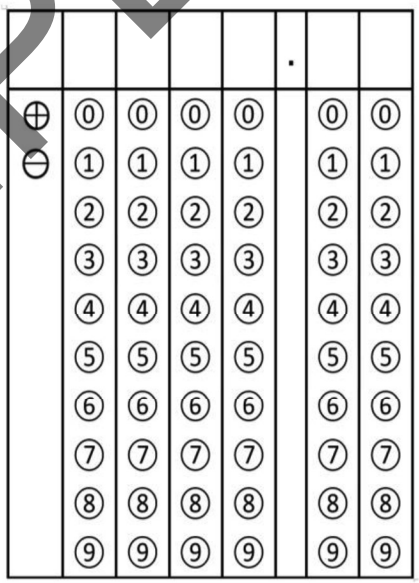
C 21,120.5 ft.

D 16,390 ft.

2 (6.4G)

Alexandro sells $\frac{6}{15}$ of his baseball card collection. What decimal is equivalent to the fraction of his collection Alexandro sells?

Record your answer and fill in the bubbles. Be sure to use the correct place value.



3 (6.4G)

Bethany gets 23 out of 25 problems correct on her math quiz. What percent is equivalent to the fraction of problems Bethany gets correct?

A 23%

B 90%

C 92%

D 108%

SpiralEd Solutions

Spiral 36

1 (6.5B)

Rochelle correctly answers 25 out of 40 math questions correctly. What percent of questions does Rochelle answer correctly?

F 62.5%

G 50%

H 75.2%

J 48.5%

2 (6.5B)

Bailey completes 56 of her 64 homework problems before dinner. What percent of her homework problems does Bailey complete before dinner?

A 60%

B 87.5%

C 56%

D 72.5%

3 (6.2E)

Ella's teacher said, "Write three divided by twelve on your paper." Which expression would the teacher mark as correct?

F $\frac{12}{3}$

G $3\overline{)12}$

H $12 \div 3$

J $\frac{3}{12}$

SpiralEd Solutions

Spiral 37

1 (6.4A)

The number of cookies in a package is described by the rule $y = 26x$. Which statement describes this relationship?

A There are 26 packages per cookie.

B There are 26 more packages than cookies.

C There are 26 cookies per package.

D There are 26 more cookies than packages.

2 (6.5B)

A fisherman throws back 8 out of the 12 fish he catches, because they are too small. What percent of fish does the fisherman throw back?

F 60%

G 75%

H 66.7%

J 33.3%

3 (6.7A)

Kaylee wrote an expression that is equivalent to $(32 + 4) \div 9$. Which expression could NOT be the one Kaylee wrote?

A $(5^2 + 3) \div 7$

B $8 \div (11 - 9)$

C $(5^2 - 4) \div 7$

D $(4^2 - 8) \div (5 - 3)$

SpiralEd Solutions

Spiral 38

1 (6.7A)

Austin wrote an expression that is equivalent to $15 - 3 \times 2 + 1$. Which expression could be the one Austin wrote?

F $2^2 + 2 \bullet 3$

G $(2^2 + 2) \bullet 3$

H $2^2 \bullet 2 + 3$

J $2^2 \bullet (2 + 3)$

2 (6.7A)

Reggie wrote an expression that is equivalent to $(2 + 6) \bullet (5 - 2)$. Which expression could be the one Austin wrote?

A $(4^2 + 2) \div 3$

B $(4^2 \bullet 3) \div 2$

C $4^2 \div 2 - 3$

D $4^2 \bullet 2 + 3$

3 (6.7B)

A teacher writes $\frac{3}{5}(x + 10) - 12$ on the board. Some students identify it as an expression, while others say it is an equation. Four of their responses and reasons are listed. Choose the best response.

F The numbers, operations, and variables form an equation, because parentheses always indicate an equation.

G The numbers, operations, and variables form an expression, because parentheses always indicate an expression.

H The numbers, operations, and variables form an equation, because only equations have fractions.

J The numbers, operations, and variables form an expression, because no equals sign is present.

SpiralEd Solutions

Spiral 39

1 (6.7C)

Which pair of expressions is equivalent?

A $\frac{1}{2}(4x+6)-2x+3$ and $-2(2x-3)$

B $2(-3x-4)+3$ and $6x-2$

C $\frac{1}{3}(6x-12)+2x$ and $4(x-1)$

D $-(x-2)$ and $2(-3x-4)+3$

2 (6.7D)

Which two expressions are equivalent?

F $\frac{1}{2}\bullet(2x-8)$
$(2x-8)\bullet\frac{1}{2}$

G $9(x+5)$
$(9\bullet x)-(9\bullet 5)$

H $\frac{1}{2}x+4$
$\frac{x}{2}+\frac{4}{2}$

J $(2\bullet x)\div 4$
$4\div(2\bullet x)$

3 (6.7D)

Which two expressions are equivalent?

A $9(x+5)$
$(9\bullet x)-(9\bullet 5)$

B $\frac{1}{2}x+4$
$\frac{x}{2}+4$

C $x-(8-3)$
$(x-8)-3$

D $4\bullet 6\div x$
$4\div x\bullet 6$

SpiralEd Solutions

Spiral 40

1 (6.7D)

Which expression is equivalent to $(3+2)+x$?

F $x-(3+2)$ **G** $(3\bullet x)+(2\bullet x)$

H $(2+3)+x$ **J** $3(x+2)$

2 (6.7D)

Which expression is equivalent to $x \div 2+5$?

A $x \div 5+2$ **B** $\frac{1}{2}\bullet 5+x$

C $5+2 \div x$ **D** $\frac{1}{2}\bullet x+5$

3 (6.4B)

A bag contains red, blue, green, and yellow marbles. Fourteen marbles are drawn from the bag.

- 4 red
- 3 blue
- 5 green
- 2 yellow

If the bag contains 70 marbles, predict how many of them are not yellow

F 20 **G** 60

H 36 **J** 10

SpiralEd Solutions

Spiral 41

1 (6.4G)

David uses $4.50 of the $6.00 he has in his pocket to buy a sandwich. What percent is equivalent to the fraction of his money David uses to buy a sandwich?

A 45%

B 60%

C 72%

D 75%

2 (6.4G)

Jackson has $2.50. What fraction of a dollar is equivalent to the amount of money Jackson has?

F $\frac{5}{2}$

G $\frac{3}{2}$

H $\frac{2}{5}$

J $\frac{1}{4}$

3 (6.5B)

Orlando eats 5 out of 8 pieces of his pizza. What percent of his pizza does Orlando eat?

A 16%

B 106%

C 6.25%

D 62.5%

SpiralEd Solutions

Spiral 42

1 (6.5B)

When John completed 300 miles of his trip, he completed 25%. What is the total distance of John's trip?

F 325 miles

G 120 miles

H 1,800 miles

J 1,200 miles

2 (6.7A)

Anderson wrote an expression that is equivalent to $2^2 \bullet (2+3)$. Which expression could be the one that Anderson wrote?

A $2 \bullet 4 + 6$

B $2 - 4 \bullet 6$

C $2 \bullet 4 - 6$

D $2(4+6)$

3 (6.5A)

The list shows the number of peaches picked from a tree during the first four days of harvest.

8 24 72 216

By what factor did the number of peaches change each day from the first day to the fourth day?

F 72

G 9

H 3

J 2

SpiralEd Solutions

Spiral 43

1 (6.2B)

Which of the following statements is true?

A The opposite of 121 is -121, and its absolute value is 121.

B The opposite of 256 is -256, and its absolute value is -256.

C The opposite of -264 is -264, and its absolute value is 264.

D The opposite of 125 is 521, and its absolute value is 125.

2 (6.7A)

Evan wrote an expression that is equivalent to $(5^2 + 3) \div 7$. Which expression could be the one that Evan wrote?

F $2 \bullet 4 - 6$

G $8 \div (11 - 9)$

H $4^2 \div 2 - 3$

J $(5^2 - 4) \div 7$

3 (6.7D)

Which two expressions are equivalent?

A $3(x - 4)$
$3 \bullet x - 3 \bullet 4$

B $4 + (x + 3)$
$(4 + x) + (4 + 3)$

C $\frac{1}{2} \bullet (2x - 8)$
$2 \bullet (2x - 8)$

D $\frac{1}{2}x + 4$
$4 - \frac{1}{2}x$

SpiralEd Solutions

Spiral 44

1 (6.9A)

Owen plans a 12-day backpacking trip covering 147 total miles. Which equation can Owen use to determine how many miles, *m*, he must hike each day to complete 147 miles in 12 days?

F $12 = \frac{m}{147}$

G $m + 12 = 147$

H $12m = 147$

J $m + 12 = 147$

2 (6.10A)

Maria needs at least 1.5 liters of water for a science experiment. Which inequality represents all the possible amounts of water in milliliters, x, that Maria needs?

A $x \geq 1.5$

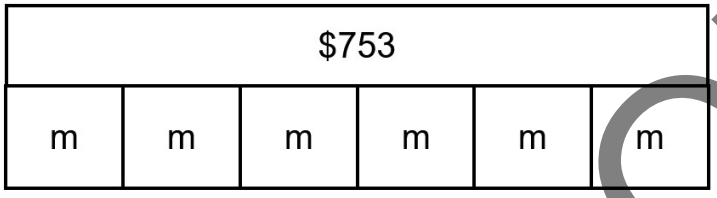
B $x \geq 1500$

C $x \leq 1500$

D $x \geq 150$

3 (6.10A)

Anthony charges Mr. Gomez $753 every six months to walk his dog twice a day. He created the model to show the monthly charge, *m*, for walking the dog.



What was the Anthony's monthly rate for dog walking?

F $62.75

G $75.30

H $125.50

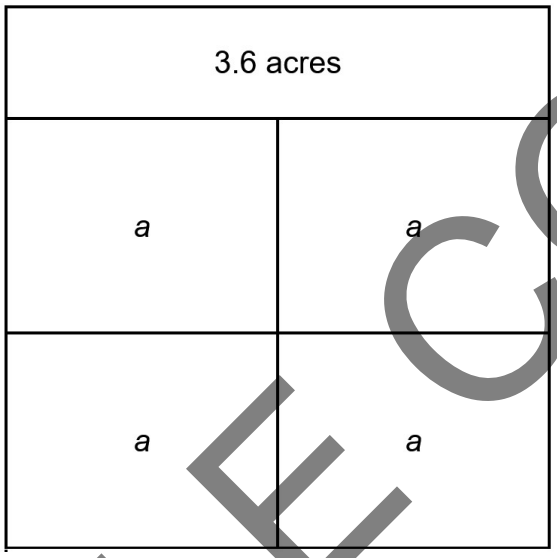
J $152.50

SpiralEd Solutions

Spiral 45

1 (6.10A)

Connor plows a rectangular field that has an area of 3.6 acres. The field is divided into four equal sections. Connor plows a section each day. He created the model to calculate how many acres, *a*, he plowed each day.



How many acres did Connor plow each day?

A 9 acres

B 4 acres

C 1.2 acres

D 0.9 acres

2 (6.4H)

The perimeter of a rectangle is 24 cm. What is the perimeter of the rectangle in meters?

F 0.24 m

G 0.024 m

H 240 m

J 2,400 m

3 (6.5B)

Edgar saves 20% of his earnings. If he saves $22.50, how much does he earn?

A $112.50

B $45.00

C $450.00

D $132.75

SpiralEd Solutions

Spiral 46

1 (6.4G)

Marcus ate 0.4 of a pizza. What fraction is equivalent to the amount of pizza Jackson ate?

F $\frac{1}{4}$

G $\frac{2}{5}$

H $\frac{4}{5}$

J $\frac{8}{9}$

2 (6.7A)

Alberto wrote an expression that is equivalent to $-3(4+2)+2$. Which expression could be the one that Alberto wrote?

A $(-4)^2$

B $4^2+(-1)$

C $-4 \cdot 2+2$

D $-4 \cdot 2^2$

3 (6.7D)

Which two expressions are equivalent?

F $4-(x-3)$
$3-(4-x)$

G $9(x+5)$
$9(5+x)$

H $4+(x+3)$
$(x+3)-4$

J $\frac{1}{2}x+4$
$\frac{x}{2}+\frac{4}{2}$

SpiralEd Solutions

Spiral 47

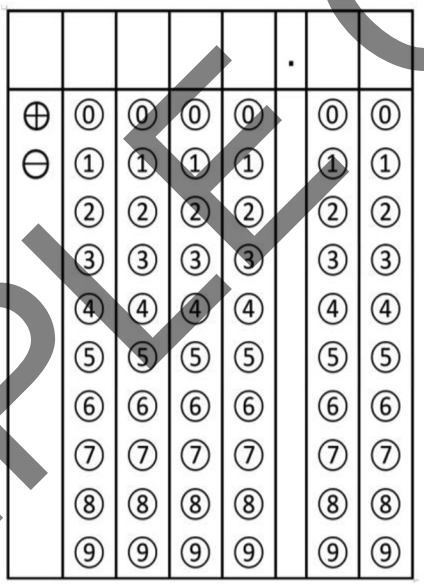
1 (6.7A)

Anna had $50. She spent $4 per day for 5 days. Then she was given $12 to split equally between herself and her two friends. She then found $5. The following expression can be used to find the amount of money Anna had after she found the $5.

$$50 - 4 \bullet 5 + 12 \div 3 + 5$$

Based on this expression, how much money did Anna have after finding the $5?

Record your answer and fill in the bubbles. Be sure to use the correct place value.



2 (6.10B)

Which equation has a solution of 24 for n?

F $\frac{5}{8}n = 15$

G $n + \frac{2}{3} = \frac{5}{6}$

H $18n = 24$

J $0.5n = 3.2$

3 (6.9C)

Camila wrote the inequality $\frac{x}{8} \leq 5$. Which situation is best represented by this inequality?

A Camila places x cookies into 5 plastic containers. There are at least 8 cookies in each container.

B Camila divides x stars equally between 8 ornaments. There are at least 5 stars on each ornament.

C Camila places x invitations into 8 equal stacks for mailing. There are no more than 5 invitations in each stack.

D Camila has 8 pies and divides each into x pieces. There were are than 5 pieces per pie.

SpiralEd Solutions

Spiral 48

1 (6.10B)

Which equation has a solution of 6.4 for n?

F $\frac{n}{6} = -4.2$

G $0.5n = 3.2$

H $-4.8 = \frac{n}{3}$

BJ $\frac{4}{5}n = \frac{7}{15}$

2 (6.4G)

By April a town receives 15 inches of rain, which is 0.125 of its annual rainfall. What percent is equal to the amount of its annual rainfall the town receives?

A 1.25%

B 12%

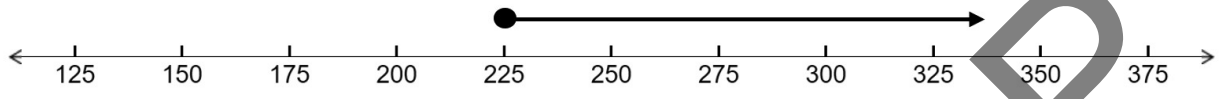
C 12.5%

D 0.0125%

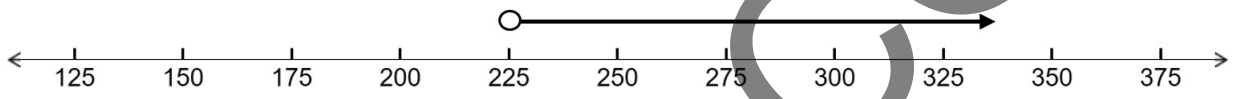
3 (6.9B)

Mrs. Timmons must maintain at least \$225 in her savings account. This can be represented by the inequality, $m \geq 225$. Which of the number lines shows the possible solutions to this inequality?

F

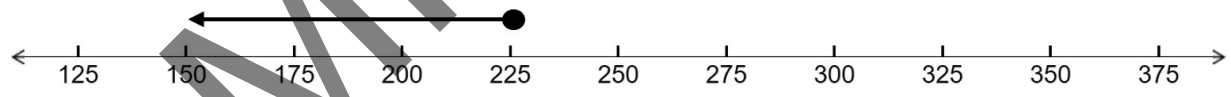


G



H

J



SpiralEd Solutions

Spiral 49

1 (6.10B)

Which inequality has a solution of $x \leq -\frac{5}{6}$ for x?

A $\frac{3}{8}x \geq -24$

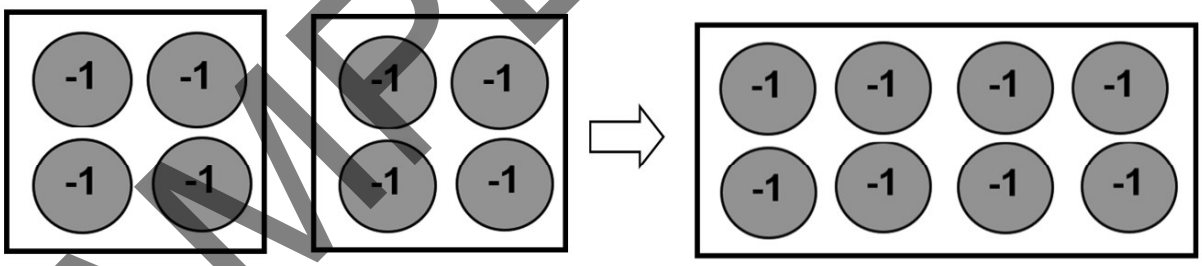
B $\frac{x}{12} \geq -\frac{2}{3}$

C $-3.6x \leq 72$

D $\frac{1}{6} + x \leq -\frac{2}{3}$

2 (6.3C)

Elaine sketches the diagram below to model a math equation.



The diagram does NOT model which equation?

F $-4 + -4 = -8$

G $-4 \times 2 = -8$

H $-4 \div -4 = -8$

J $2 \times (-4) = -8$

3 (6.7D)

Which expression is equivalent to $-9 \cdot (x - 4)$?

A $(-9 \cdot x) - 4$

B $(-9 - 4) \cdot x$

C $(-9 \cdot x) - (-9 \cdot 4)$

D $(-9 \cdot x) + (-9 \cdot 4)$

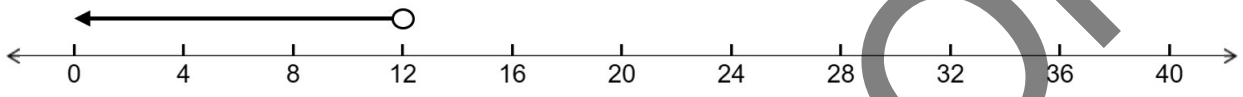
SpiralEd Solutions

Spiral 50

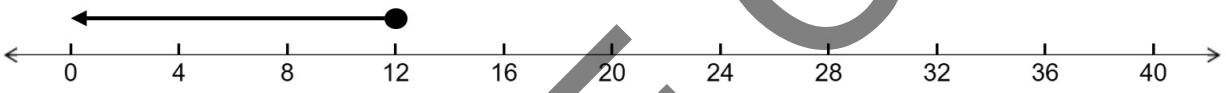
1 (6.9B)

Henry has \$20 to spend at the fair. He pays \$8 for admission. He uses the inequality $m + 8 \leq 20$, to determine how much money, *m*, he has left to spend. Which number line represents the solution for this inequality?

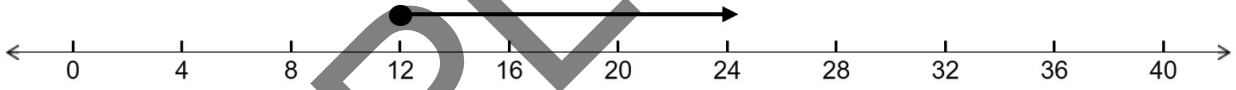
F



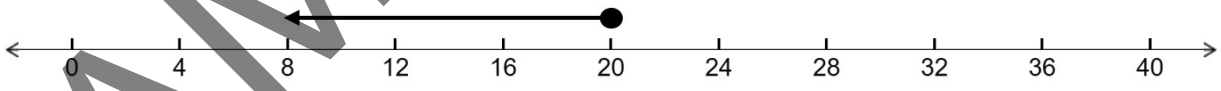
G



H



J



2 (6.5B)

Amelia completes 45% of her homework before dinner. If 9 problems are 45%, how many total problems does Amelia have to complete?

A 45 problems

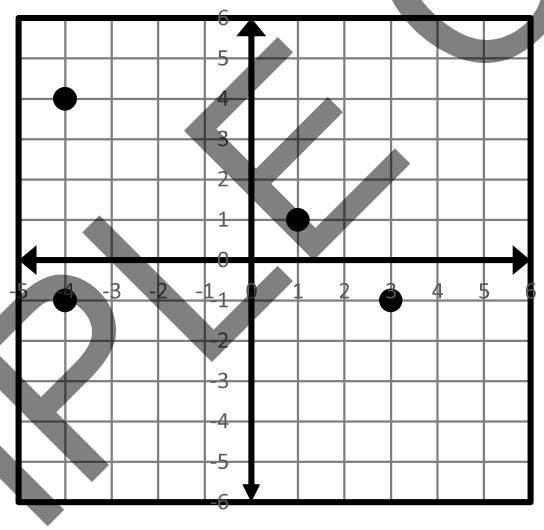
B 20 problems

C 54 problems

D 40 problems

3 (6.11)

Four points are graphed on the coordinate grid.



Which of these coordinates is not represented by the points on the grid?

F (-4, -1)

G (-4, 4)

H (3, 1)

J (1, 1)

SpiralEd Solutions

Spiral 51

1 (6.10A)

Sarah must raise at least $256 for her cheerleader uniform. She has raised $137.56. She used the inequality $x + 137.56 \geq 256$ to determine how much more money, *x*, she needs to raise. Which solution shows the amount Sarah needs to raise?

A $x \geq 118.44$

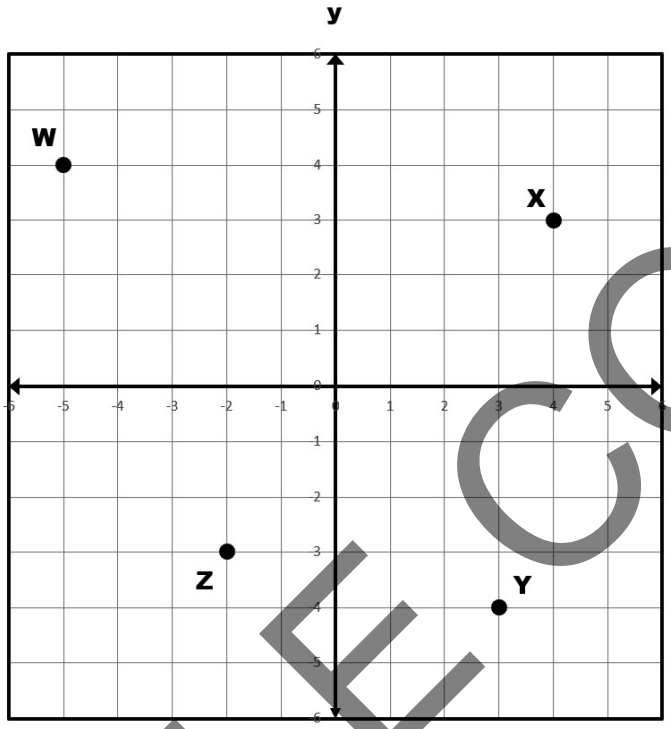
B $x \geq 119.56$

C $x \leq 118.44$

D $x \leq 119.56$

2 (6.11)

Four points are graphed on the coordinate grid.



If point *Z* is moved two units to the left and six units up, what will be the coordinates of the new point?

F (4, -3)

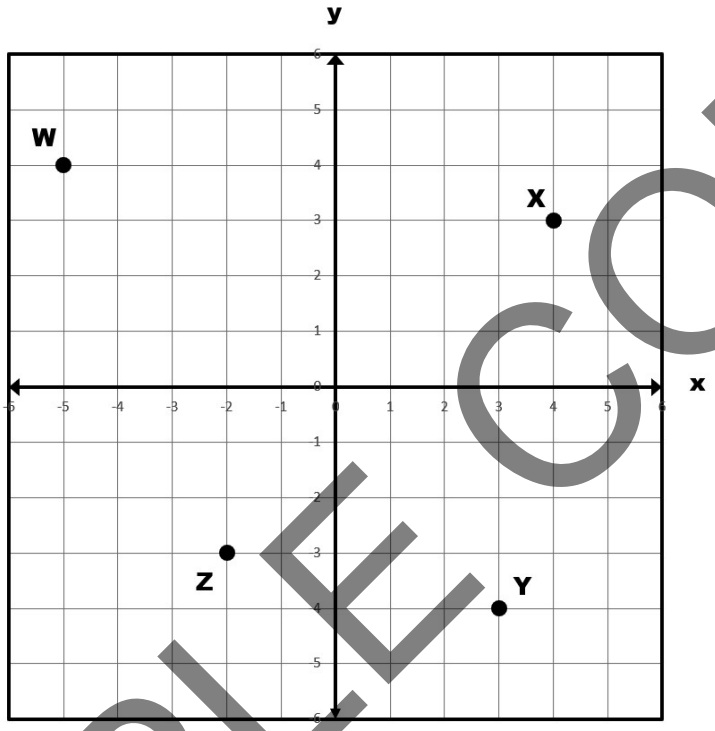
G (-4, -3)

H (-4, 3)

J (3, -4)

3 (6.11)

Four points are graphed on the coordinate grid.



If point X is moved 4 units to the left and 4 units down, what will be the coordinates of the new point?

A (-1, 0)

B (-1, -1)

C (0, -1)

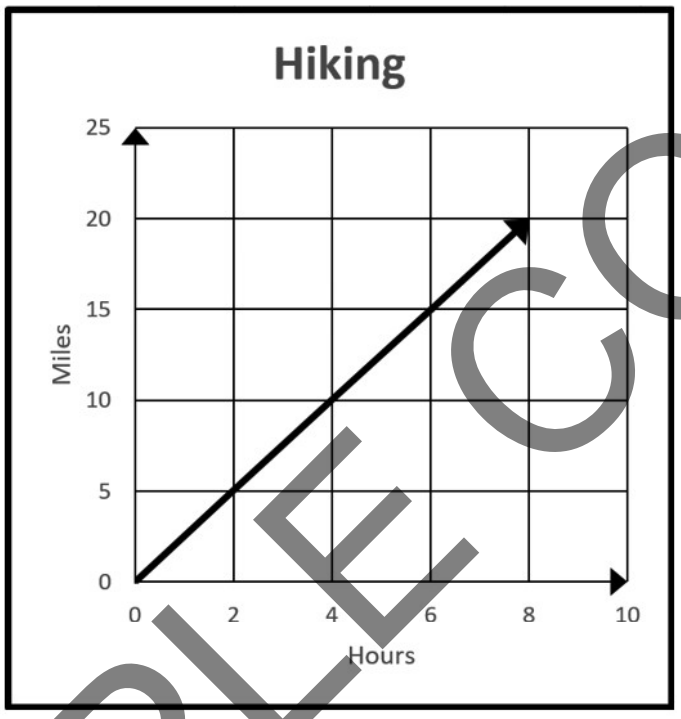
D (1, 0)

SpiralEd Solutions

Spiral 52

1 (6.6A)

The graph shows the number of miles hiked based on the time spent hiking.



Which statement is true about this relationship?

F The number of hours is the independent variable.

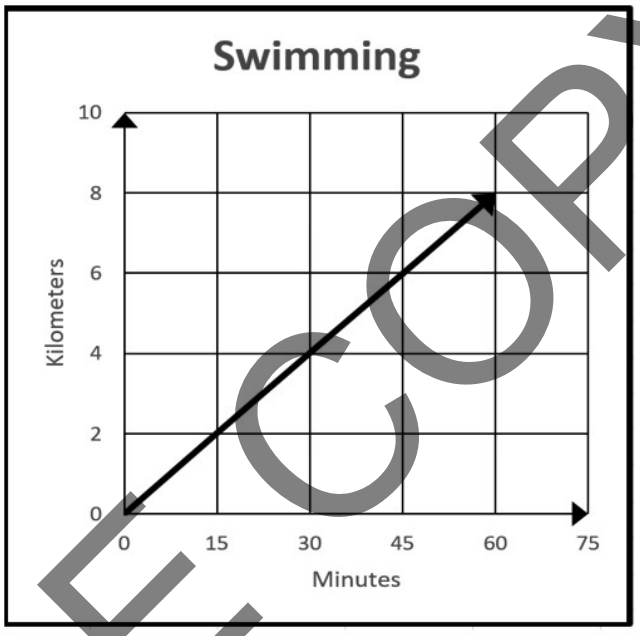
G The number of hours is the dependent variable.

H The average temperature is the dependent variable.

J The number of miles is the independent variable.

2 (6.6A)

The graph shows the distance covered in kilometers in relation to the number of minutes spent swimming.



Which statement about the relationship is NOT true?

A The number of kilometers depends on the amount of time.

B The amount of time depends on the number of kilometers.

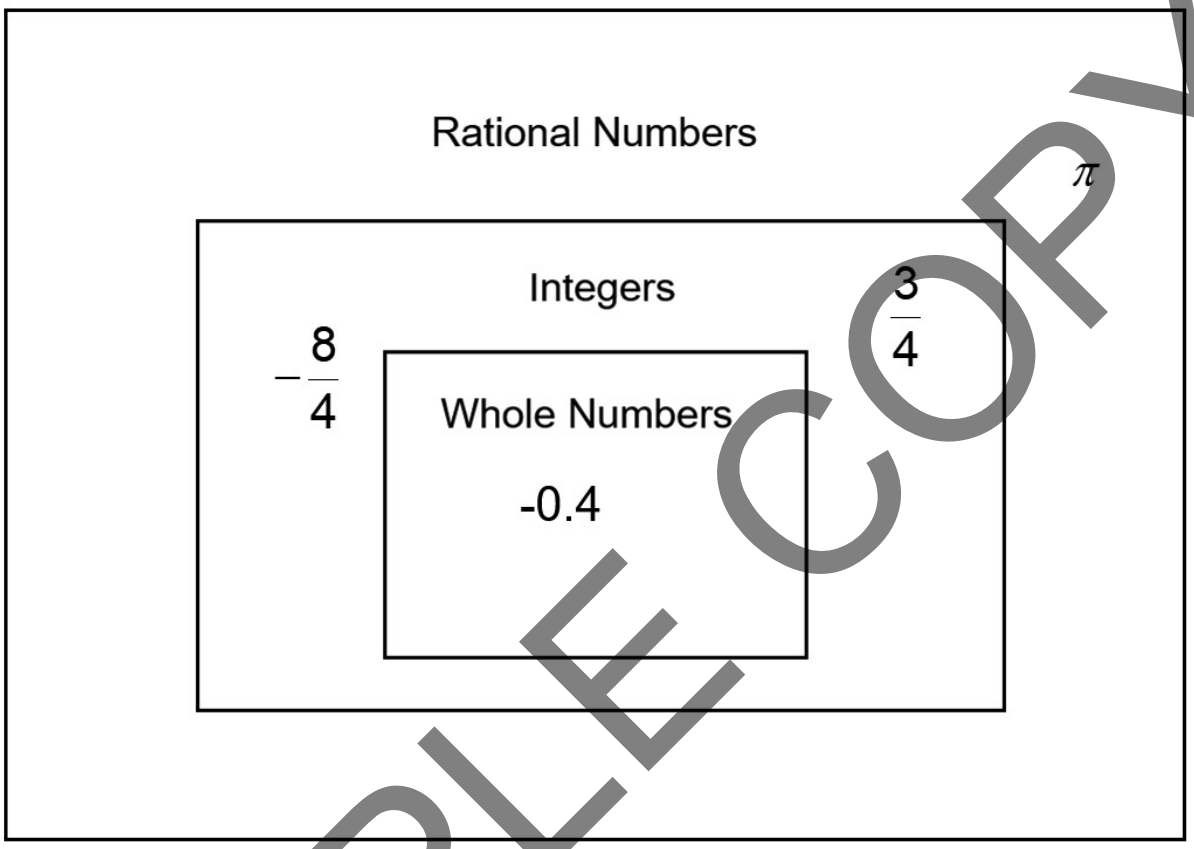
C The amount of time is the independent variable.

D The number of kilometers is the dependent variable.

SpiralEd Solutions

3 (6.2A)

Which number is in the correct position?



F -0.4

G π

H $\frac{3}{4}$

J $-\frac{8}{4}$

SpiralEd Solutions

Spiral 53

1 (6.6B)

The table shows the relationship between *g*, the number of guests invited to a party, and *n*, the number of tables required.

Number of Guests, *g*	16	24	36	48
Total Number of Tables, *n*	6	8	11	14

Which equation represents the relationship in the table?

A $n = \frac{1}{2}g - 2$

B $n = \frac{1}{4}g + 2$

C $n = 2g + 4$

D $n = \frac{1}{4}g$

2 (6.7D)

Which two expressions are equivalent?

F $9(x + 5)$ and $(9 + x) \cdot (9 + 5)$

G $(6 - x) \cdot 3$ and $(x - 6) \cdot 3$

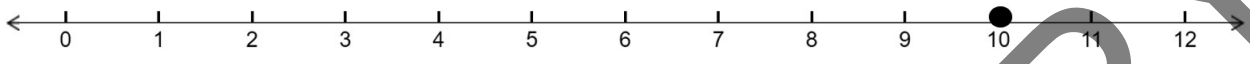
H $4 + (x + 3)$ and $(4 + x) + 3$

J $(2 \cdot x) \div 4$ and $4 \div (2 \cdot x)$

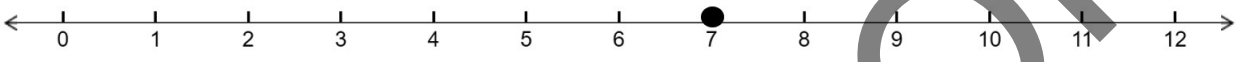
3 (6.9B)

Amber solved the equation $x - (-3) = 7$ and graphed the solution on a number line. Which number shows the solution to Amber's equation?

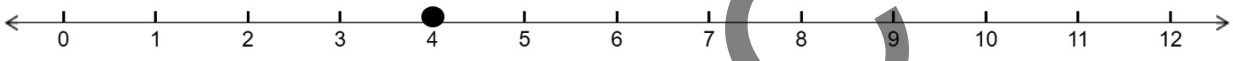
A



B



C



D

SpiralEd Solutions

Spiral 54

1 (6.6B) The table shows the relationship between *d*, the number of days a car is rented, and *C*, the total cost for the rental.

Number of Days, *d*	Total Cost, *C*
1	$300
2	$375
3	$450
4	$525

Which equation represents the relationship in the table?

F $C = 300d$

G $C = x + 299$

H $C = 75d + 225$

J $C = 75d$

2 (6.6B)

The table shows the relationship between the amount of money remaining in Josh's weekly lunch account, m, after he eats lunch each day, d.

Number of Days, d	Money Remaining, m
1	\$9.00
2	\$6.75
3	\$4.50
4	\$2.25

Which equation represents the relationship in the table?

A $m = -2.25d + 9$

B $m = -2.25d$

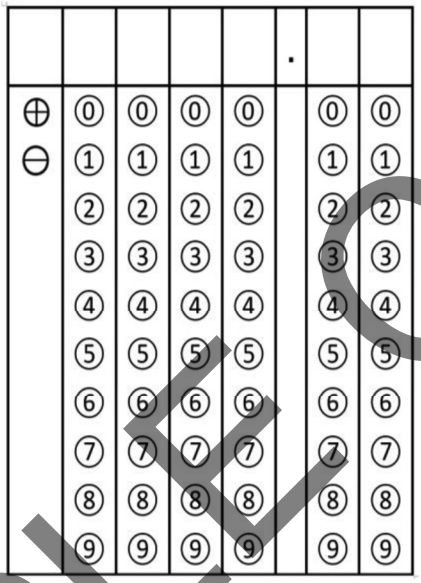
C $m = 2.25d - 11.25$

D $m = 11.25 - 2.25d$

3 (6.10A)

Aurora drove 234.9miles at an average rate of 52.2 miles per hour. The equation $52.2x = 234.9$ can be used to determine, x, how long she drove in hours. How long did Aurora drive?

Record your answer and fill in the bubbles. Be sure to use the correct place value.



SpiralEd Solutions

Spiral 55

1 (6.6C)

The cost of renting a car is $78 per day. Which equation can be used to find C, the cost in dollars of renting a car for d days?

A $C = 78d$

B $C = d - 78$

C $C = \frac{d}{78}$

D $C = d + 78$

2 (6.6C)

Abel is four years younger than his sister, Kate. Which equation can be used to find a, Abel's age, in relation to k, Kate's age?

F $a = 4k$

G $a = k - 4$

H $k = a - 4$

J $a = k + 4$

3 (6.4G)

The school librarian determines that 72% of the books in the school library are fiction. What fraction is equivalent to the percent of books in the school library that are fiction?

A $\frac{7}{10}$

B $\frac{18}{25}$

C $\frac{8}{25}$

D $\frac{18}{20}$

SpiralEd Solutions

Spiral 56

1 (6.6C)

The number of pizzas ordered, p, is $\frac{1}{4}$ the total number of customers, c.

Which equation can be used to find the number of pizzas ordered for c, customers?

F $p = 4c$

G $p = -4c$

H $p = \frac{c}{4}$

J $c = p + 4$

2 (6.3B)

A student multiplies a positive whole number by each of the numbers below. Which number will result in a product greater than the original number?

$\frac{4}{5}$ $\frac{7}{8}$ $\frac{5}{6}$ $\frac{3}{2}$

A $\frac{4}{5}$

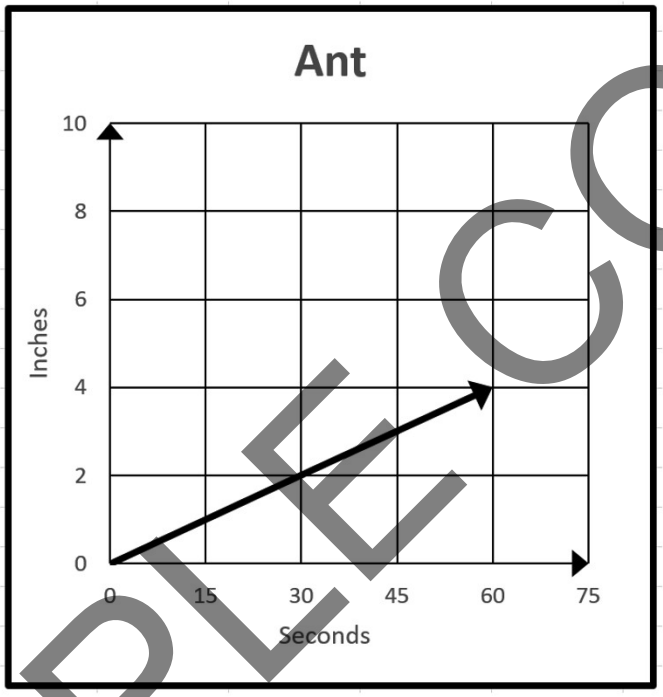
B $\frac{7}{8}$

C $\frac{5}{6}$

D $\frac{3}{2}$

3 (6.6A)

The graph shows the distance covered in inches in relation to the amount of time in seconds an ant spends crawling down the sidewalk.



Which statement about the relationship is NOT true?

F The number of inches is the dependent variable.

G The number of seconds is the independent variable.

H The number of seconds depends on the number of inches.

J The number of inches depends on the number of seconds.

SpiralEd Solutions

Spiral 57

1 (6/4G)

April saves $0.25 of every dollar she earns babysitting. What percent is equal to the amount April saves of every dollar?

A 2.5%

B 250%

C 0.025%

D 25%

2 (6.4G)

Benny earns 45% of his money by mowing lawns. What fraction is equivalent to percent of his money Benny earns by mowing lawns?

F $\frac{9}{20}$

G $\frac{4}{5}$

H $\frac{5}{4}$

J $\frac{9}{10}$

3 (6.5B)

The sale price for a jacket is 60% of the original price. If the sale price is $72.00, what is the original price?

A $180.00

B $90.00

C $120.00

D $78.00

SpiralEd Solutions

Spiral 58

1 (6.5B)

Raul donates 35% of his savings to a relief fund. If Raul has $520 in savings, how much money does he donate?

F $182.00

G $1,820.00

H $148.57

J $1,485.7

2 (6.7D)

Which two expressions are equivalent?

A $9(x+5)$

$\frac{(5+x)}{9}$

B $\frac{1}{2}\bullet(2x-8)$

$2\bullet(2x-8)$

C $(2\bullet x)+4$

$4-(2\bullet x)$

D $-(2-x)$

$(-1\bullet 2)-(-1\bullet x)$

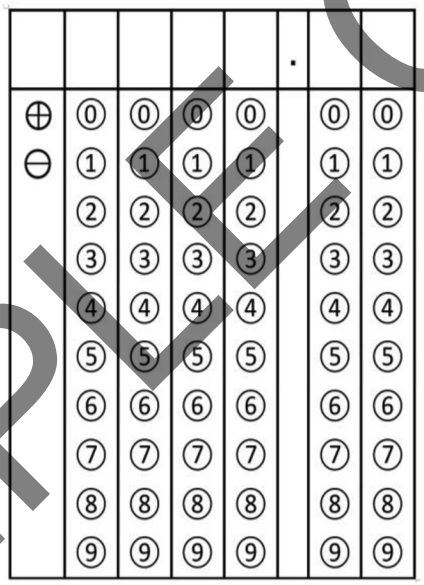
3 (6.7A)

A on-line spirit shop started Monday with 72 t-shirts to print for sale. On Tuesday they received a shipment of 4 boxes with 12 t-shirts in each box. On Wednesday the store sent out 6 orders of 5 shirts each and 4 orders of 9 t-shirts each. No other shirts were received or shipped. The following expression can be used to find the number of remaining t-shirts.

$$72 + 4 \cdot 12 - 6 \cdot 5 - 4 \cdot 9$$

Based on this expression, how many t-shirts remained at the end of the day on Wednesday?

Record your answer and fill in the bubbles. Be sure to use the correct place value.



SpiralEd Solutions

Spiral 59

1 (6.7D)

Which expression is equivalent to $-2 \cdot (x - 3)$?

A $(-2 \cdot x) - (-2 \cdot 3)$

B $(-2 \cdot x) - 3$

C $(x - 3) - 2$

D $x \cdot (-2 - 3)$

2 (6.5B)

Elaina has $364.00 and puts 25% of the money in savings, how much does she save?

F $288.00

G $91.00

H $123.00

J $72.80

3 (6.5B)

Eighty-two percent of Edmund's 300 baseball cards picture New York Yankees. How many of Edmund's baseball cards picture New York Yankees?

A 284

B 264

C 246

D 248

SpiralEd Solutions

Spiral 60

1 (6.7A)

A math teacher asked her class to rewrite this expression numerically, "three times the square of five increased by ten divided by two." Sam wrote the correct numerical expression: $3 \cdot 5^2 + 10 \div 2$. Which value is equivalent to Sam's answer?

F 42.5

G 230

H 80

J 53.5

2 (6.7D)

Which expression is equivalent to $5 + (x + 4)$?

A $5 \cdot (x + 4)$

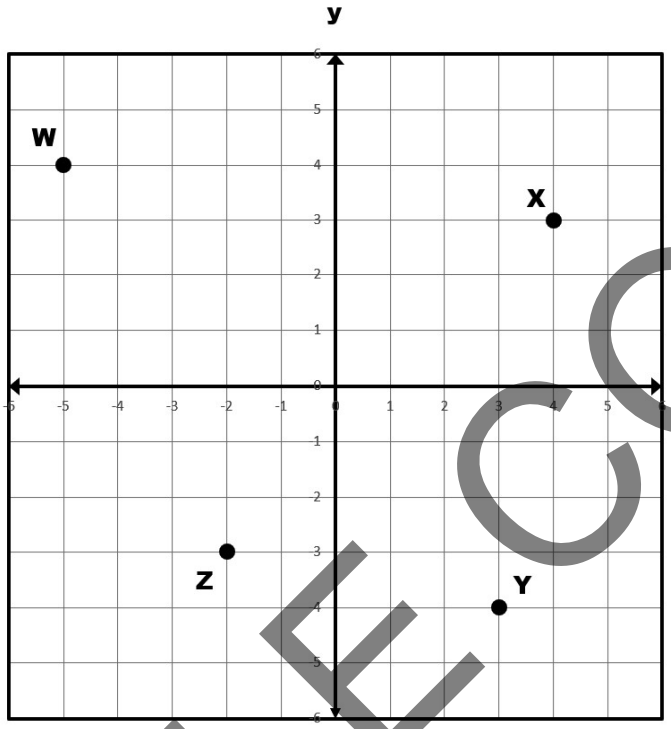
B $(5 + x) + 4$

C $4 \cdot (x + 5)$

D $(5 \cdot x) + (5 \cdot 4)$

3 (6.11A)

2 Four points are graphed on the coordinate grid.



If point *W* is moved three units to the right and five units down, what will be the coordinates of the new point?

F (-1, -2)

G (-2, -1)

H (2, -1)

J (-2, 1)

SpiralEd Solutions

Spiral 61

1 (6.9C)

Leo wrote the equation $\frac{1}{2}x = 35$. Which situation is best represented by this equation?

A Leo spent half of his $35 on dinner.

B Leo hiked half of his 35-mile distance on Monday. He hiked 17.5 miles on Tuesday and Wednesday.

C Leo drank half of a sports drink, *x* ounces, and ate a 35 gram protein bar.

D Leo spent half his study time, *x*, working on math. He spent 35 minutes on math.

2 (6.8A)

The two shorter sides of a triangle measure 15 cm and 21 cm. Which of the following could be the length of the longest side of the triangle?

F 30 cm

G 36 cm

H 42 cm

J 5 cm

3 (6.8A)

Which of the following lengths can be the sides of a triangle?

A 15 cm, 9 cm, 5 cm

B 15 cm, 17 cm, 25 cm

C 13 cm, 18 cm, 31 cm

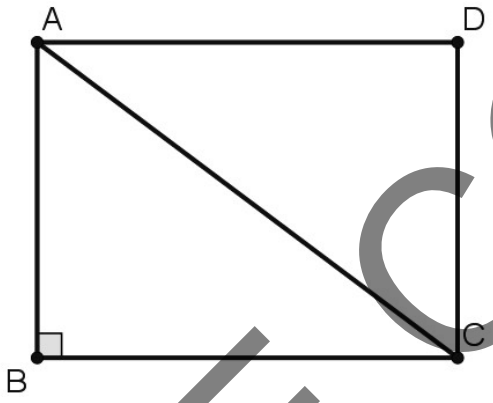
D 12 cm, 11 cm, 25 cm

SpiralEd Solutions

Spiral 62

1 (6.8B)

The area of rectangle ABCD is 12 square units. The area of triangle ABC is 6 square units.



This figure models the relationship between which pair of formula?

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

G $A = bh$ and $A = \frac{1}{2}(b_1 + b_2)h$

H $A = \frac{1}{2}bh$ and $A = \frac{1}{2}(b_1 + b_2)h$

J $A = bh$ and $V = bh$

2 (6.6B)

The table shows the relationship between *g*, the number of guests invited to a barbecue, and *n*, the number of pounds of barbecue to be prepared.

Number of Guests, *g*	16	24	36	48
Total Number of Pounds, *n*	18	22	28	34

Which equation represents the relationship in the table?

A $n = \frac{1}{2}g - 2$

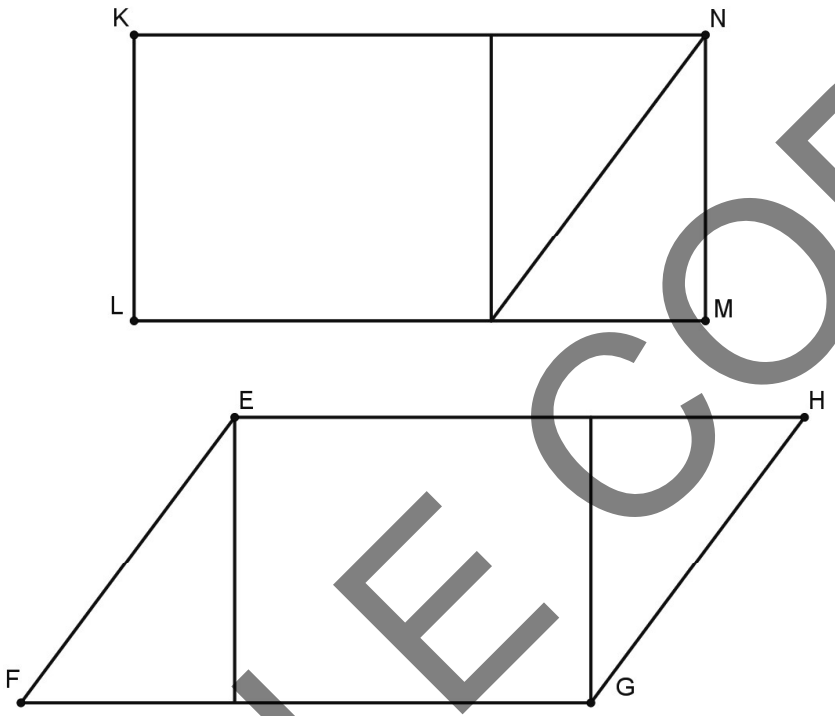
B $n = \frac{1}{4}g + 2$

C $n = 2g + 4$

D $n = \frac{1}{2}g + 10$

3 (6.8B)

Rectangle *KLMN* and Parallelogram *EFGH* have the same base and height, and have equivalent areas.



Based on this information, which statement is true?

F The information proves that the formula $A = \frac{1}{2}bh$ can be used to determine the area of a rectangle, as well as the area of a parallelogram.

G The information proves that the formula $A = bh$ can be used to determine the area of a rectangle, as well as the area of a parallelogram.

H The information proves that the area of a rectangle can be calculated using the formula $A = bh$. The area of a parallelogram can be calculated using the formula $A = bh + 2(\frac{1}{2}bh)$.

J The information proves that the area of a parallelogram and the area of a trapezoid can be each be calculated using the formula, $A = \frac{1}{2}(b_1 + b_2)h$.

SpiralEd Solutions

Spiral 63

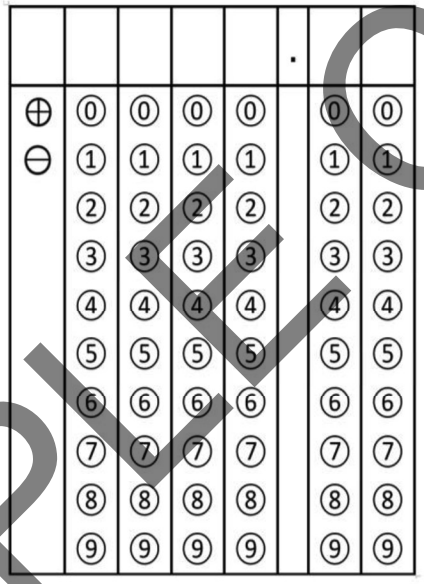
1 (6.7A)

Eli wrote the prime factorization for 198, but was interrupted before he finished.

$$2 \cdot 3^2 \cdot \_\_\_\_$$

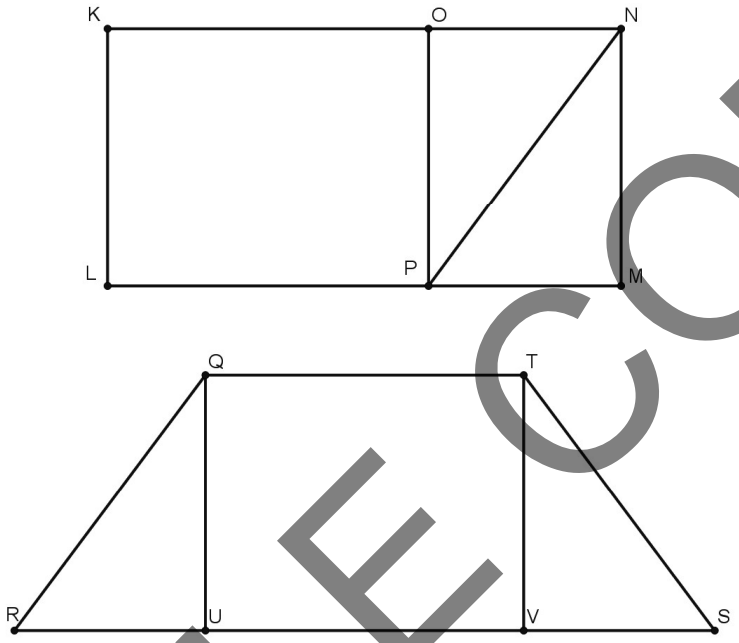
What number does Eli need to complete the prime factorization?

Record your answer and fill in the bubbles. Be sure to use the correct place value.



2 (6.8B)

The area of rectangle *KLMN* is equal to the area of trapezoid *QRST* and $LM = \frac{1}{2}(OT + RS)$.



These figures model the relationship between which pair of formula?

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

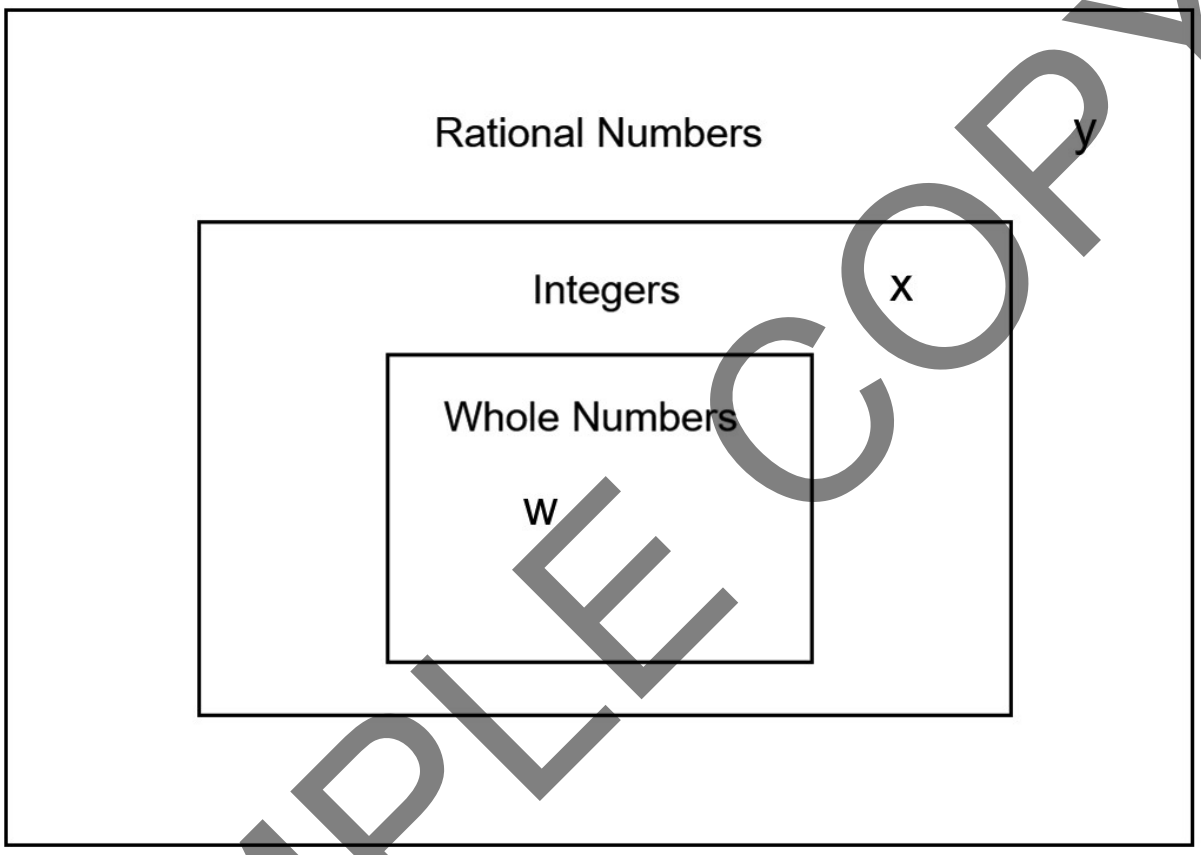
G $A = bh$ and $A = \frac{1}{2}(b_1 + b_2)h$

H $A = \frac{1}{2}bh$ and $A = \frac{1}{2}(b_1 + b_2)h$

J $A = bh$ and $V = bh$

3 (6.2A)

Which letter represents the best location for $\frac{8}{2}$?



A w

B x

C y

D The number does not belong in this graphic.

SpiralEd Solutions

Spiral 64

1 (6.8C)

A rectangular patio has an area of A square feet. The length of the patio is 16 feet. Which equation represents w, the width of the patio in feet?

F $w = \frac{A}{16}$

G $w = \frac{16}{A}$

H $w = 2(16 + A)$

J $w = A - 2(16)$

2 (6.4H)

A rock has a mass of 4,250 grams. What is the mass of the rock in kilograms?

A 42.5 kg

B 425 kg

C 0.425 kg

D 4.25 kg

3 (6.8C)

The perimeter of a square is P units long. Which equation represents s, the length of one side of the square?

F $s = \frac{4}{P}$

G $s = \frac{P}{4}$

H $s = 4P$

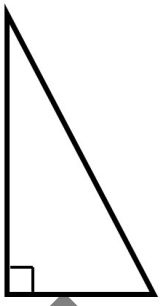
J $s = P - 4$

SpiralEd Solutions

Spiral 65

1 (6.10A)

Cameron drew a right triangle and measured the base to be 3.6 cm. If the area of the triangle is 14.4 square centimeters, Cameron can use the equation $14.4 = 1.8h$ to determine the height, *h*, of the triangle in centimeters.



What is the height of the triangle in centimeters?

A 16 cm

B 4 cm

C 8 cm

D 4.5 cm

2 (6.8C)

If one base of a trapezoid is 6 inches long, and the height of the trapezoid is 5 inches, which equation represents b_2, the second base for a trapezoid with an area of *A* square inches?

F $b_2 = \frac{5}{2}A - 6$

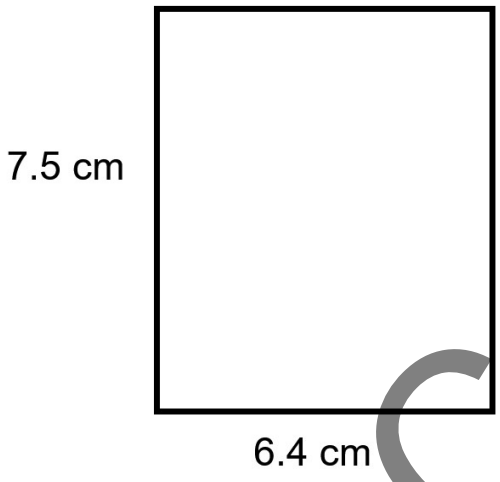
G $b_2 = \frac{5}{2}A + 6$

H $b_2 = \frac{2}{5}A - 6$

J $b_2 = \frac{2}{5}A$

3 (6.8D)

The rectangle shown represents the base of a rectangular prism.



If the prism is 5 cm tall, what is the volume of the prism in cubic centimeters?

A 240 cm^3

B 48 cm^3

C 13.9 cm^3

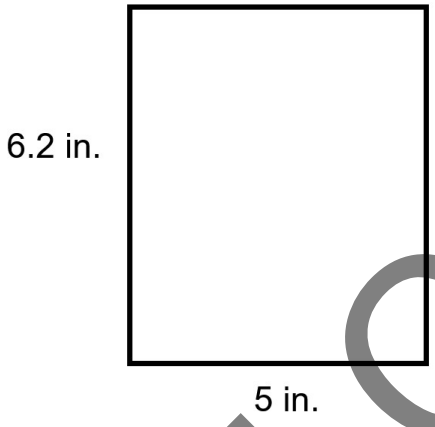
D 69.5 cm^3

SpiralEd Solutions

Spiral 66

1 (6.8D)

The rectangle shown represents the base of a rectangular prism.



If the prism is 12 cm tall, what is the volume of the prism in cubic centimeters?

Record your answer and fill in the bubbles. Be sure to use the correct place value.

					.		
⊕	⓪	⓪	⓪	⓪		⓪	⓪
⊖	①	①	①	①		①	①
	②	②	②	②		②	②
	③	③	③	③		③	③
	④	④	④	④		④	④
	⑤	⑤	⑤	⑤		⑤	⑤
	⑥	⑥	⑥	⑥		⑥	⑥
	⑦	⑦	⑦	⑦		⑦	⑦
	⑧	⑧	⑧	⑧		⑧	⑧
	⑨	⑨	⑨	⑨		⑨	⑨

2 (6.8D)

James completed the chart below, showing the dimensions and volume of four rectangular prisms.

Prism	Base Length	Base Width	Height	Volume
A	12.2 cm	4 cm	8 cm	390.4 cm^3
B	9.4 cm	5.5 cm	9 cm	465.3 cm^3
C	5.3 cm	7.4 cm	10 cm	329.2 cm^3
D	4.6 cm	3.4 cm	2.5 cm	39.1 cm^3

Which prism does NOT have the correct volume?

A Prism A

B Prism B

C Prism C

D Prism D

3 (6.4D)

Kayla wins her swimming race with a time of 38.4 seconds for the 100-meter freestyle. What is her average speed in meters per second?

F 3.84 meters per second

G 38.4 meters per second

H 26 meters per second

J 2.6 meters per second

SpiralEd Solutions

Spiral 67

1 (6.8C)

The volume of a rectangular prism is V cubic feet. If the length of the base is 12 feet, and the height of the prism is 9 feet, which equation represents w, the width of the base?

A $w = \frac{108}{V}$

B $w = 12 + \frac{V}{9}$

C $w = 2(12 + 9V)$

D $w = \frac{V}{108}$

2 (6.4G)

A store gives a 24% discount to members of the military. What decimal is equivalent to the percent discount the store gives to members of the military?

F 0.024

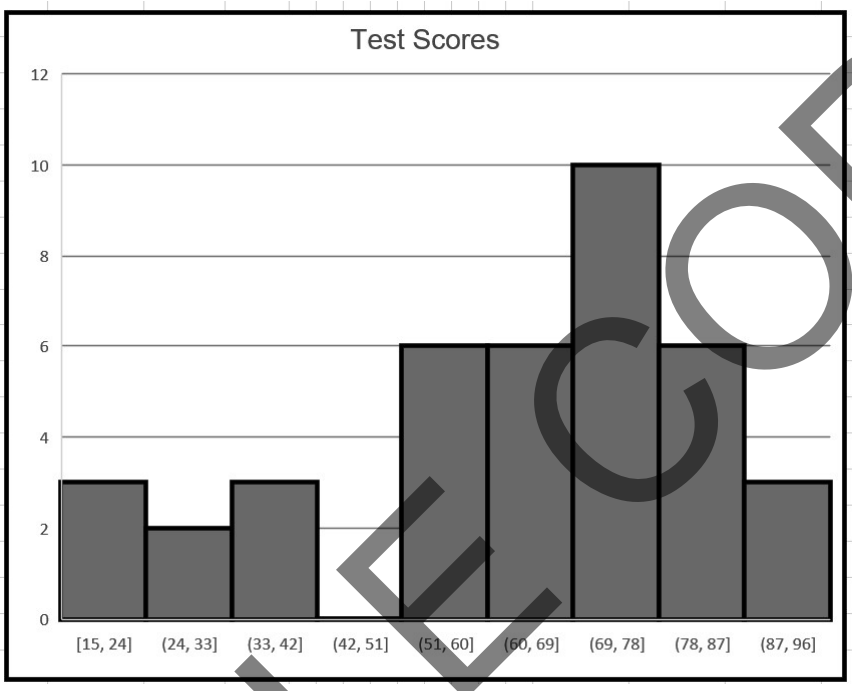
G 2.4

H 0.24

J 24.0

3 (6.12B)

The histogram shows the test scores for forty students.



Which statement best describes the data shown in the histogram?

A The peak of the data is at 69-78.

B The data distribution is symmetrical.

C The data distribution has no gaps.

D The data has a uniform distribution.

SpiralEd Solutions

Spiral 68

1 (6.2B)

Which of the following statements is true?

F The opposite of -86 is -86, and its absolute value is 86.

G The opposite of 56 is -56, and its absolute value is 56.

H The opposite of -18 is -18, and its absolute value is -18.

J The opposite of 43 is 34, and its absolute value is 43.

2 (6.8A)

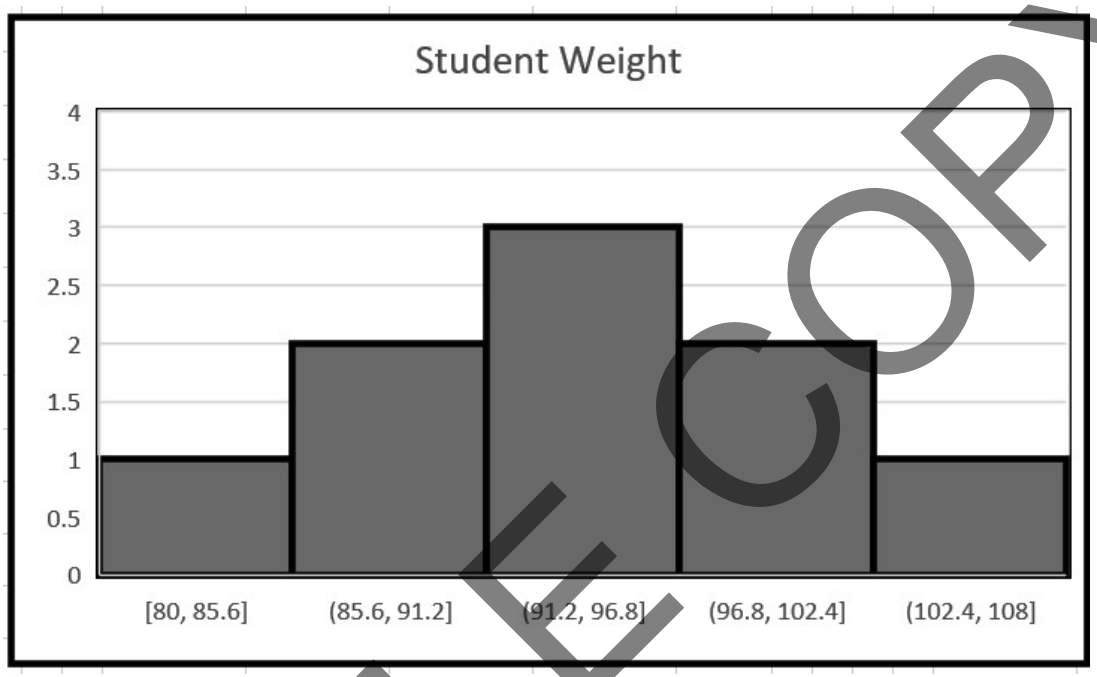
In triangle *KLM* the measure of angle *KLM* is 42°, and the measure of angle *MKL* is 57°. What is the measure of angle *LMK* in degrees?

Record your answer and fill in the bubbles. Be sure to use the correct place value.

					.		
⊕	0	0	0	0		0	0
⊖	1	1	1	1		1	1
	2	2	2	2		2	2
	3	3	3	3		3	3
	4	4	4	4		4	4
	5	5	5	5		5	5
	6	6	6	6		6	6
	7	7	7	7		7	7
	8	8	8	8		8	8
	9	9	9	9		9	9

3 (6.12B)

The histogram shows the weights of ten students.



Which statement best describes the data shown in the histogram?

F The peak of the data is at 85.6-91.2.

G The data distribution is symmetrical.

H The data distribution has one gaps.

J The data distribution is not uniform.

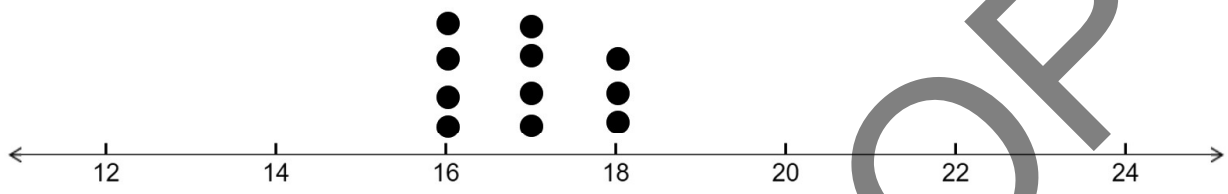
SpiralEd Solutions

Spiral 69

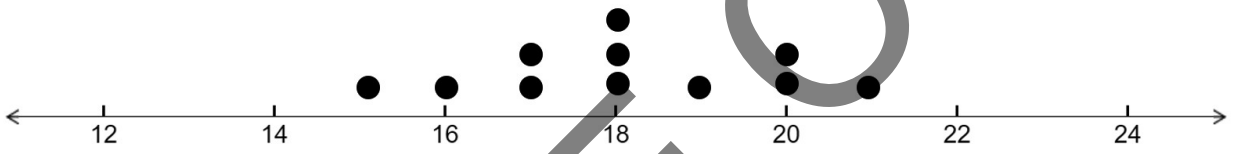
1 (6.12B)

The dot plots show the ages of students enrolled in two different driver's education programs.

Program A



Program B



Which statement is true?

A The graph for Program A has a greater spread than the graph for Program B.

B The graph for Program B is more uniform than the graph for Program A.

C The graph for Program B has a greater spread than the graph for Program A.

D Both of the graphs are symmetrical.

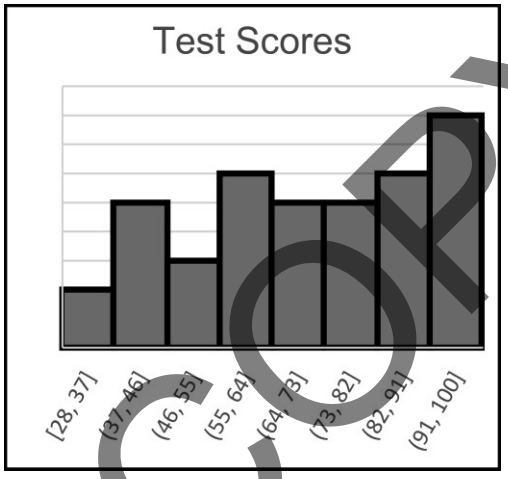
2 (6.12A)

Amberly matches the histogram to the stem-and-leaf plot.

Test Scores

Stem	Leaf
2	8
3	4
4	0 0 0 6 6
5	2 2 2 8 8
6	4 4 4 4
7	0 0 0 0 0 6 6 6 6
8	2 8 8 8 8 8 8
9	4 4 4 4
10	0 0 0 0

KEY
5|2 = 52



Which statement is true?

F The histogram matches the stem-and-leaf plot. Each score in the histogram corresponds to a score in the stem and leaf plot.

G The histogram does not match the stem-and-leaf plot. There are 38 scores represented in the histogram for the forty scores in the stem and leaf plot.

H The histogram matches the stem-and-leaf plot, except for the period 55-64.

J The histogram does not match the stem-and-leaf plot. There are 6 scores in the period from 55-64 on the histogram, while there are 9 scores on the stem and leaf plot.

3 (6.6A)

The table shows the relationship between the amount of money in Jason's savings account and the number of months he has been saving.

Jason's Savings Account

Number of Months	Amount of Savings
1	$75
4	$300
8	$600
10	$750
12	$900

Which list shows the dependent quantities in the graph?

A 1, 4, 8, 10, 12

B 1, 75, 4, 300

C 75, 300, 600, 750, 900

D 8, 600, 10, 750

SpiralEd Solutions

Spiral 70

1 (6.12B)

The stem and leaf plots show the weights of students in two sixth grade PE classes.

Class A

Student Weight

Stem	Leaf
8	4 5
9	1 3 6
10	3 8 9

KEY
5|2 = 52

Class B

Student Weight

Stem	Leaf
8	2
9	2 4
10	1 4 6 8 9 9

KEY
5|2 = 52

Which statement is true?

F Class A has a greater spread than Class B.

G Both graphs are centered in the 90-pound range.

H Class A has a more definite peak that Class B.

J Class A has a more uniform distribution that Class B.

2 (6.3A)

Which statement is NOT true?

A $12 \div 4 = 12 \bullet \frac{1}{4} = 3$

B $16 \div \frac{4}{5} = 16 \bullet \frac{5}{4} = 20$

C $15 \div \frac{5}{3} = 15 \bullet \frac{3}{5} = 9$

D $15 \div 4 = 15 \bullet \frac{4}{1} = 60$

3 (6.7A)

Which of the following prime factorizations creates the largest number?

F $2^4 \bullet 3 \bullet 5$

G $2^5 \bullet 3 \bullet 5^2$

H $2^3 \bullet 3^2 \bullet 5$

J $2^2 \bullet 3^2 \bullet 5^2$

SpiralEd Solutions

Spiral 71

1 (6.12A)

The stem-and-leaf plot records the weights of nine sixth graders.

Student Weight

Stem	Leaf
10	0 2 3
11	2 2 6 8
12	1 5

KEY
5|2 = 52

Which set of data matches the stem and leaf plot?

A 100, 102, 103, 112, 113, 116, 118, 121, 125

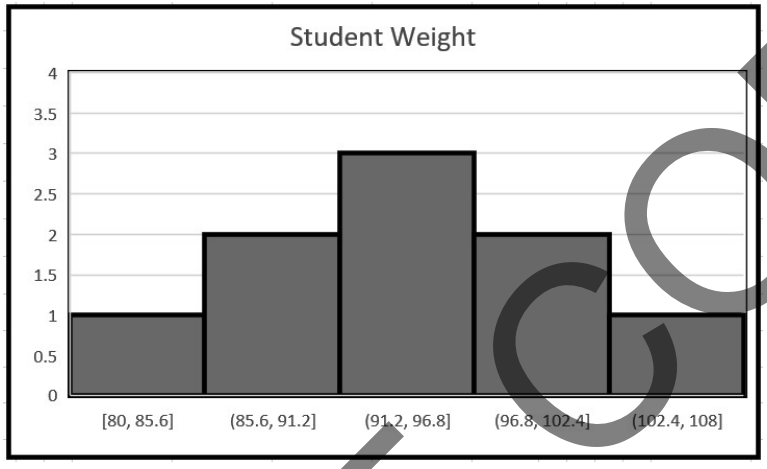
B 100, 102, 112, 112, 116, 118, 121, 125

C 100, 102, 103, 112, 112, 116, 118, 121, 125

D 100, 102, 103, 112, 112, 116, 118, 125

2 (6.12A)

The histogram shows the weight ranges of nine sixth grade students.



Which of the weights below could NOT be one of the weights represented in the histogram?

F $96\frac{4}{5}$ pounds

G $80\frac{1}{3}$ pounds

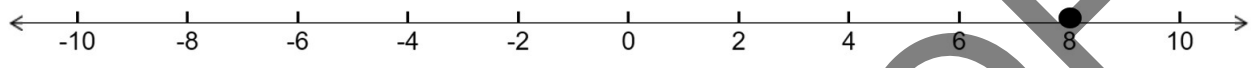
H $91\frac{1}{2}$ pounds

J $108\frac{1}{4}$ pounds

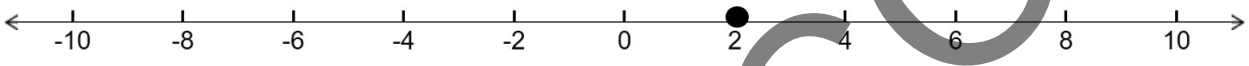
3 (6.9B)

Lincoln solved the equation $\frac{x}{4} = -2$ and graphed the solution on a number line. Which number line shows the solution to Lincoln's equation?

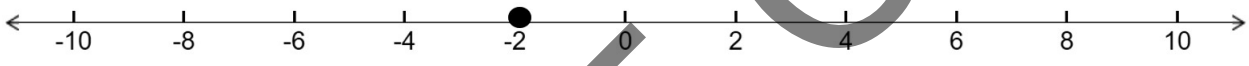
A



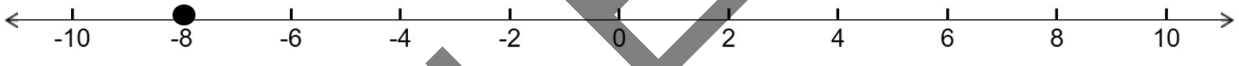
B



C



D



SpiralEd Solutions

Spiral 72

1 (6.4E)

Eighty-two percent of sixth graders pass the end of year math exam. How is this amount written as a fraction?

F $\frac{21}{25}$

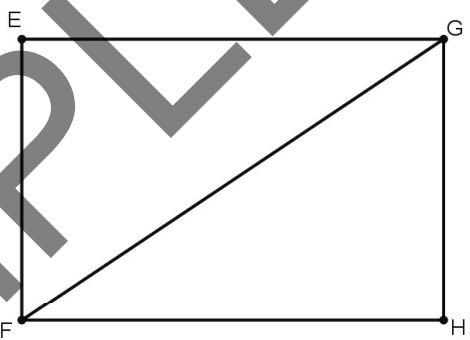
G $\frac{8}{2}$

H $\frac{9}{50}$

J $\frac{41}{50}$

2 (6.8B)

Nick measures the dimensions of the figure below and determines that the area of triangle *EFG* plus the area of triangle *HGF* equals the area of rectangle *EFGH*.



Nick's measurements confirm the relationship between which pair of formula?

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

B $A = bh$ and $A = \frac{1}{2}(b_1 + b_2)h$

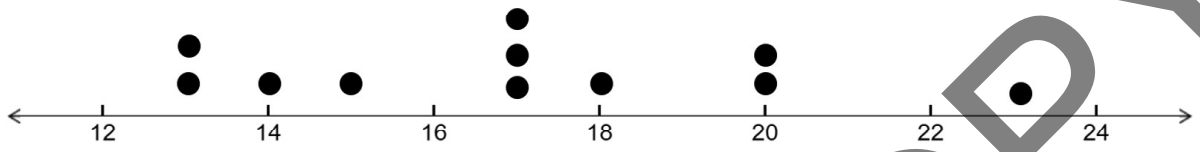
C $A = \frac{1}{2}(b_1 + b_2)h$ and $A = \frac{1}{2}bh$

D $A = bh$ and $V = bh$

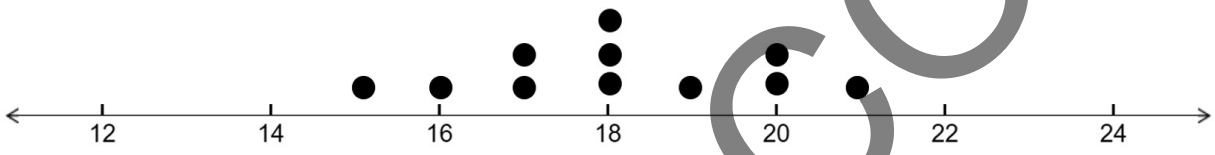
3 (6.13A)

The graphs show the ages of members of two swim teams.

Dolphins



Stingrays



Which statement is true?

F Dolphins have a greater age range than the Stingrays.

G The mean age of the Stingrays is less than the mean age of the Dolphins.

H The mode of the Dolphin data is greater than the mode of the Stingray data.

J There are more swimmers on the Dolphin team than on the Stingray team.

SpiralEd Solutions

Spiral 73

1 (6.14A)

The table shows the monthly fees for the checking accounts at two banks.

Checking Account Fees

Bank	Monthly Fee
C	$15
D	first six months free, $20 per month after first six months

Which statement is best supported by the information in the table?

A The annual cost of an account at Bank D will be less than the cost of an account at Bank C for the first year, and more in future years.

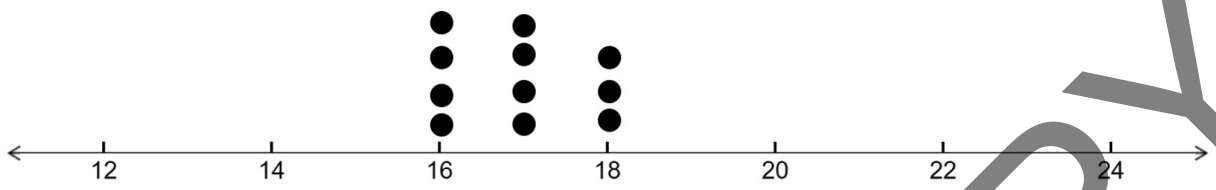
B The annual cost of an account at Bank C will always be less than the annual cost of an account at Bank D.

C The annual cost of an account at Bank C will always be more than the annual cost of an account at bank D.

D The annual cost of the two accounts is the same.

2 (6.13A)

The dot plot shows the ages of students on the varsity golf team.



Which statement is NOT true?

F There are eleven members of the varsity golf team.

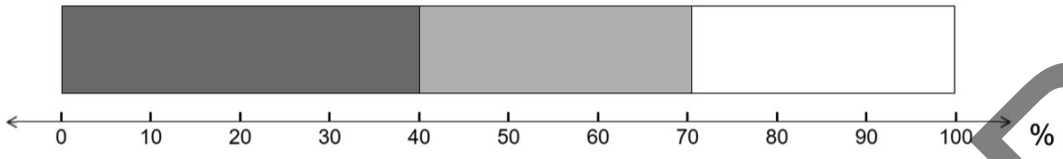
G The mean of the data is two less than the median.

H The range is two.

J The median is 17.

3 (6.12D)

A bag contains colored chips. The percentage of each color is shown in percentage bar graph.



KEY
Red
Blue
Green

Which table could be represented by the percentage bar graph?

A

Color	Number
Red	20
Blue	15
Green	15

B

Color	Number
Red	25
Blue	5
Green	15

C

Color	Number
Red	12
Blue	18
Green	20

D

Color	Number
Red	12
Blue	21
Green	17

SpiralEd Solutions

Spiral 74

1 (6.14C)

The check register shows Drake's balance at the beginning of the day on March 18.

Date	Description	Deposits (dollars)	Withdrawals (dollars)	Balance (dollars)
				$425.87
3/18	deposit			
3/18	cash withdrawal			
3/18	transfer			

During the day Drake deposits $45, withdraws $84, and transfers $50 from his checking account to his savings account. What is Drake's balance at the end of the day?

F $336.87

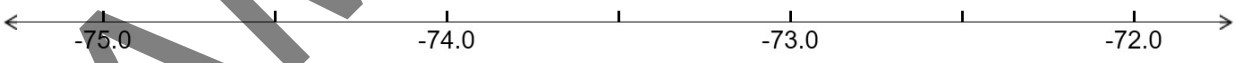
G $436.87

H $386.87

J $428.87

2 (6.2C)

A student correctly labels the numbers -72.6, -73.5, -74.8, and -72.44 on the number line below.



Which number will be located closest to -73.0?

A -73.5

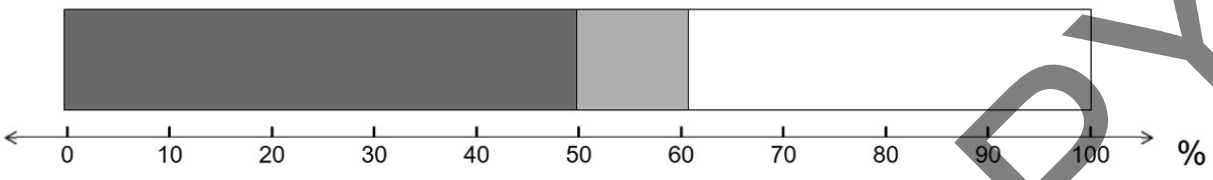
B -72.6

C -74.8

D -72.44

3 (6.12D)

A bag contains colored chips. The percentage of each color is shown in percentage bar graph.



KEY
Red
Blue
Green

Which table could be represented by the percentage bar graph?

F

Color	Number
Red	20
Blue	15
Green	15

G

Color	Number
Red	25
Blue	5
Green	20

H

Color	Number
Red	12
Blue	18
Green	20

J

Color	Number
Red	12
Blue	21
Green	17

SpiralEd Solutions

Spiral 75

1 (6.14A)

The table shows the monthly fees for the checking accounts at two banks.

Checking Account Fees

Bank	Monthly Fee
R	$15
S	free checking for the first year; $18 per month after the first year

If a customer plans to maintain an account at a local bank for only four years, while attending college, which is the least expensive option?

A Bank S will be the less expensive option no matter how long the customer maintains the account.

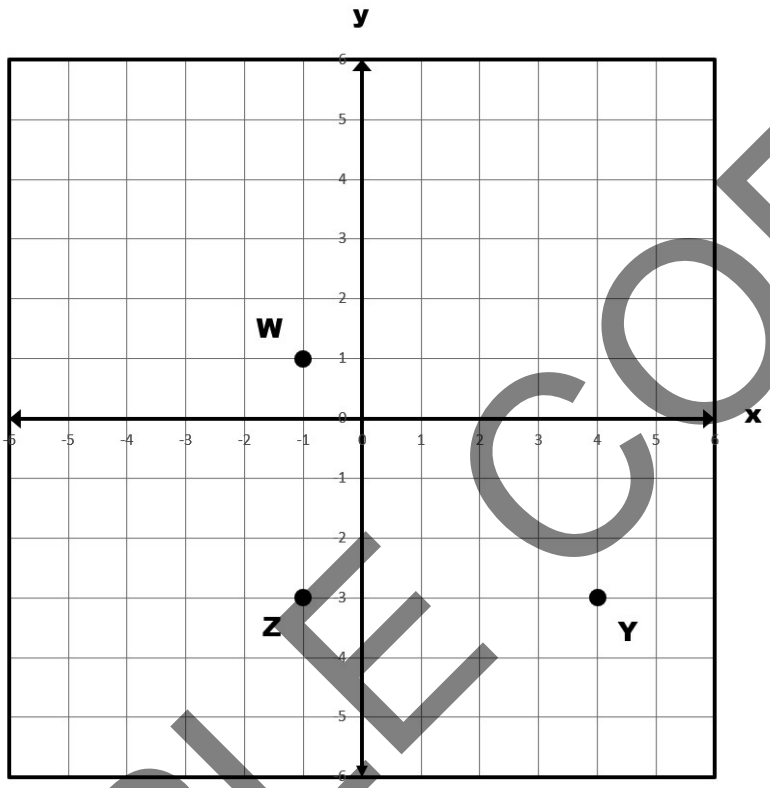
B Bank S is less expensive up to 72 months.

C Bank R will be the less expensive option after the first year, no matter how long the customer maintains the account.

D After 24 months the accounts cost the same annually.

2 (6.11)

Points *W*, *Y*, and *Z* form three vertices of a rectangle.



Which ordered pair represents the coordinates for point *X*, the fourth vertex of the rectangle?

F (1, 4)

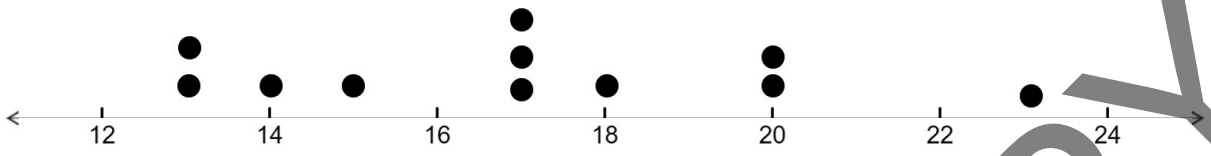
G (-1, -4)

H (4, -1)

J (4, 1)

3 (6.12A)

Roman constructed the dot plot below.



Which set of data did Roman use to construct the dot plot?

A 13, 13, 15, 15, 17, 17, 17, 18, 20, 21, 23

B 13, 13, 14, 15, 17, 17, 17, 18, 20, 20, 23

C 13, 13, 13, 15, 17, 17, 18, 18, 20, 20, 23

D 12, 13, 14, 15, 17, 17, 17, 18, 20, 20, 22

SpiralEd Solutions

Spiral 76

1 (6.4C)

A bag of 24 buttons contains

- 6 red buttons
- 12 blue buttons
- 2 yellow buttons
- 4 green buttons

Which statement is true?

F The number of blue buttons is 2 more than the number of red buttons.

G The number of red buttons is 3 times the number of yellow buttons.

H The number of yellow buttons is $\frac{1}{2}$ times the number of blue buttons.

J The number of blue buttons is 3 times the number of red buttons.

2 (6.14E)

Mr. James gets a current credit report before applying for a loan to buy a new house. Which information would not be included in the report?

A the amount the family spent on their trip to an amusement park

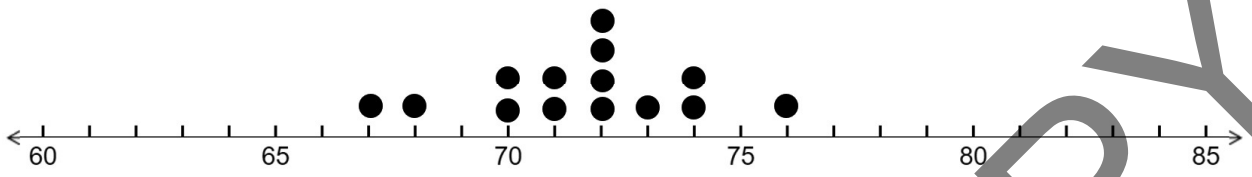
B Mr. James' Social Security number

C the account balance and payment history on all credit card accounts

D a list of anyone who accessed Mr. James credit history in the past two years

3 (6.13A)

James recorded the high temperature for two weeks.



He came to the following conclusions:

- The mean temperature is 71.57°F.
- The most common temperature is 72°F.
- The median temperature is 72°F.
- The range is 8 degrees.

Which of James' conclusions is incorrect?

F The mean temperature is 71.57°F.

G The most common temperature is 72°F.

H The median temperature is 72°F.

J The range is 8 degrees.

SpiralEd Solutions

Spiral 77

1 (6.14G)

Baker is a high school senior and just received notice that he has received a grant and loan approval for college. What is the primary difference between a grant and a loan?

A The loan will have to be repaid, and the grant will not.

B The grant will have to be repaid, and the loan will not.

C The grant will require Baker to get a job on campus.

D The loan will require Baker to volunteer on campus.

2 (6.6C)

Team uniforms cost $125 each. Which equation can be used to determine the total cost, C, of ordering uniforms for p players?

F $C = p + 125$

G $p = 125C$

H $p = \frac{C}{125}$

J $C = 125p$

3 (6.8D)

Alicia completed the chart below, showing the dimensions and area of four rectangles.

Rectangle	Length	Width	Area
A	12.2 cm	4.7 cm	57.4 cm^2
B	9.4 cm	5.5 cm	51.6 cm^2
C	5.3 cm	7.4 cm	38.22 cm^2
D	4.6 cm	3.4 cm	15.64 cm^2

Which rectangle is shown with the correct area?

A Rectangle A

B Rectangle B

C Rectangle C

D Rectangle D

SpiralEd Solutions

Spiral 78

1 (6.12C)

The list shows the height, in feet, of giant redwood trees, the tallest trees on Earth.

350, 329, 351, 345, 342, 348, 338, 356, 345

What is the mean height of the trees?

F 345

G 342.6

H 310.5

J 350

2 (6.14F)

A student is asked to list benefits of a credit report to a borrower. Which of the following would NOT be included in the list?

A spread of personal information

B check on account history and status

C check for activity that might indicate identity theft

D determine credit score

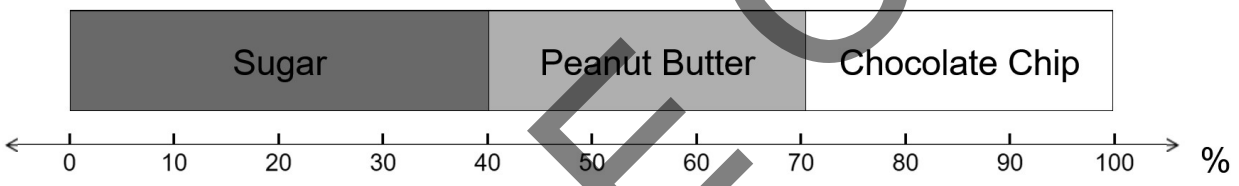
3 (6.12D)

Students were asked to vote for their favorite cookie. The table shows the survey results.

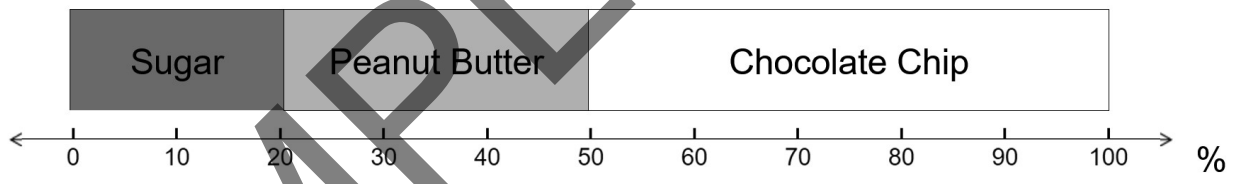
Cookie	Number
Sugar	12
Peanut Butter	18
Chocolate Chip	30

Which percentage bar graph represents the data in the table?

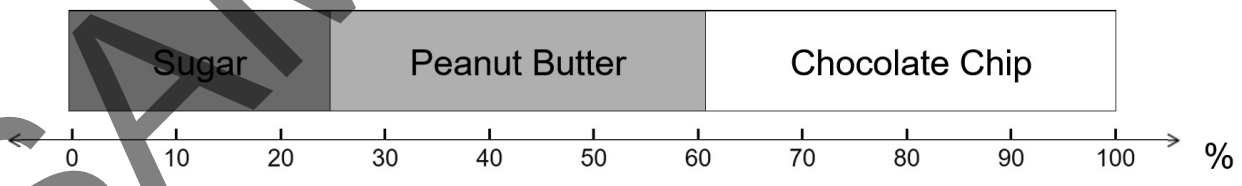
F



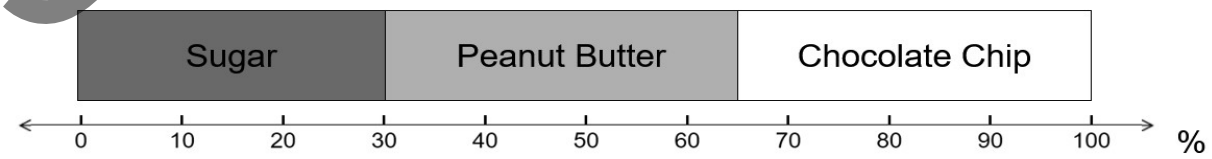
G



H



J



SpiralEd Solutions

Spiral 79

1 (6.14H)

Helen researched career opportunities, average salaries, and required education. She compiled her findings in the table below.

Occupation	Average Salary	Education Required
Administrative Assistant	$36,435	high school diploma
Registered Nurse	$61,734	college degree
Statistician	$67,324	master's degree
Physician	$193,310	doctoral degree

What conclusion can be drawn from the information?

A The more education a person has, the greater their earning potential.

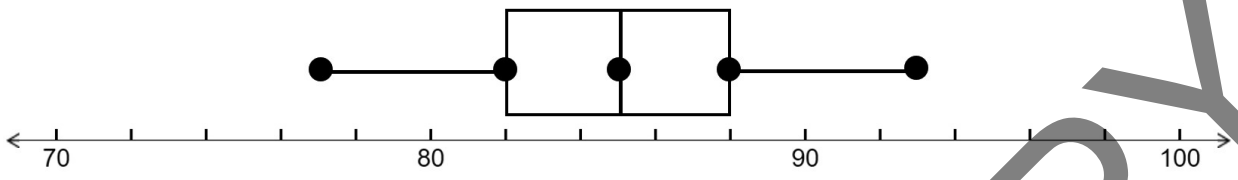
B The more education a person has, the smaller their earning potential.

C There is no relationship between education and earning potential.

D The cost of higher education outweighs the benefits of a higher degree.

2 (6.13A)

The box plot summarizes Maria's math grades.



Which statement best describes the data represented in the box plot?

F The median score is 82.5.

G The range of scores is 15 points.

H Half of Maria's scores are greater than 88.

J The interquartile range is 6.

3 (6.2E)

Which of the following statements is NOT true?

A $\frac{25}{5} = 5\overline{)25} = 25 \div 5$

B $2\overline{)1} = 1 \div 2 = \frac{1}{2}$

C $6 \div 5 = \frac{6}{5} = 6\overline{)5}$

D $\frac{9}{3} = 3\overline{)9} = 9 \div 3$

SpiralEd Solutions

Spiral 80

1 (6.13B) 1

Which of the following situations would yield the most variability in the data collected?

F A survey asks students to pick their favorite number.

G Students total the number of dots on a pair of six-sided dice.

H Students calculate the number of ounces in five cups.

J Students calculate the number of miles driven in 3.5 hours at a rate of 55 miles per hour.

2 (6.13B)

Which of the following situations would yield the least variability in the data collected?

A Students calculate the individual number of miles driven in a week by 25 teachers.

B Students calculate the number of miles driven by one car in 2.5 hours at a rate of 45 miles per hour.

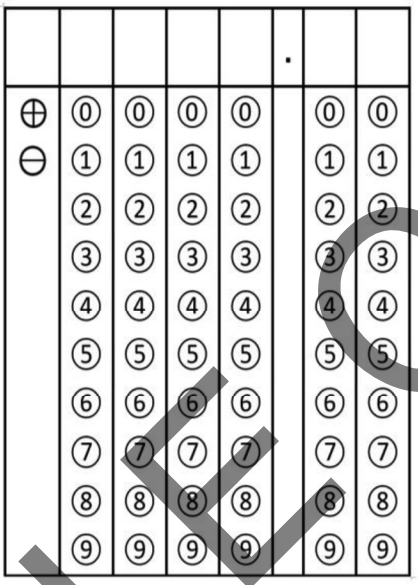
C Students calculate the average daily high temperature for each month of the school year.

D Students record the number of students absent from school each day over a six- week period.

3 (6.8A)

In triangle *KLM* the measure of angle *KLM* is 40°, and the measure of angle *MKL* is 105°. What is the measure of angle *LMK* in degrees?

Record your answer and fill in the bubbles. Be sure to use the correct place value.



SpiralEd Solutions

Spiral 81

1 (6.2B)

Which of the following statements is true?

A The opposite of -277 is 727.

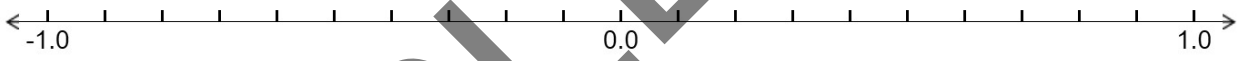
B The absolute value of 429 is -429.

C The opposite of -103 is 103.

D The absolute value of -99 is -99.

2 (6.2C)

A student correctly labels the numbers $\frac{5}{8}$, $-\frac{3}{7}$, $-\frac{2}{3}$, and $-\frac{9}{16}$ on the number line below.



Which number will be located closest to 0?

F $\frac{5}{8}$

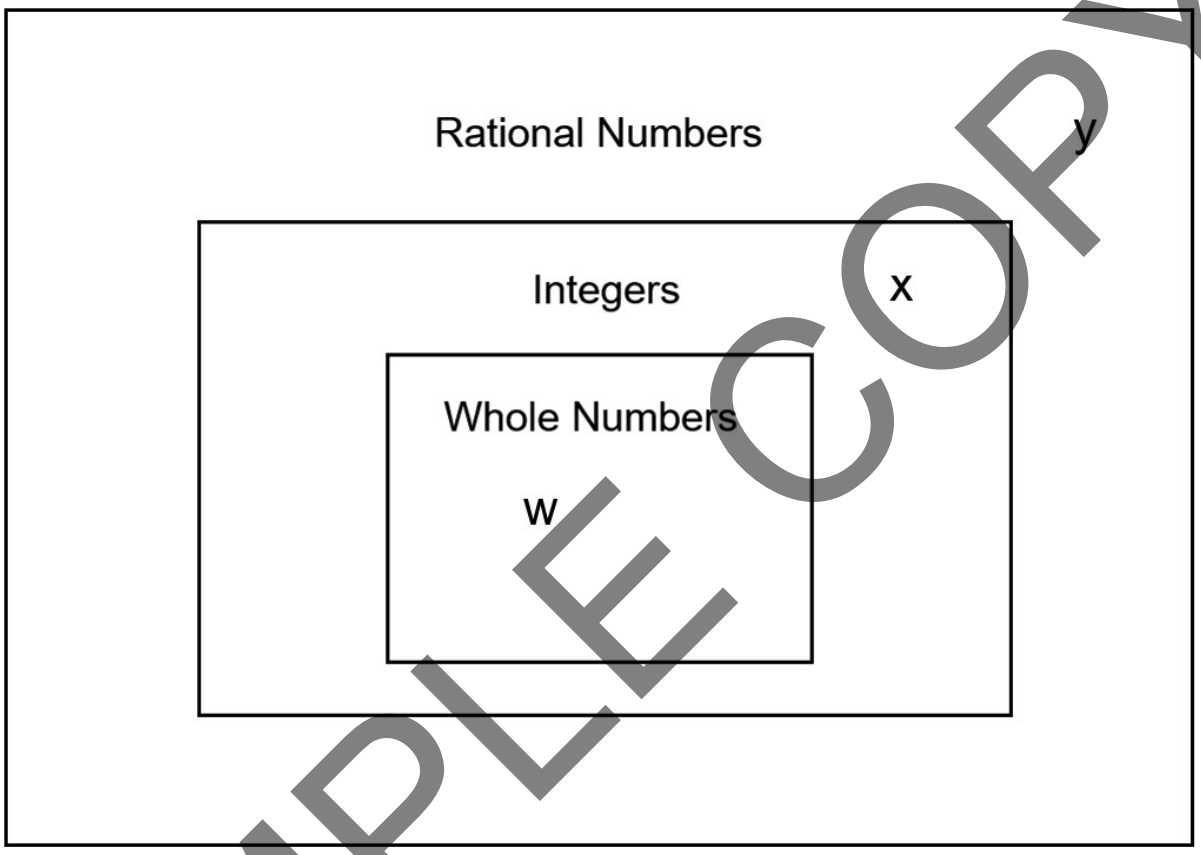
G $-\frac{3}{7}$

H $-\frac{2}{3}$

J $-\frac{9}{16}$

3 (6.2A)

Which letter represents the correct location for $-\frac{10}{5}$?



A w

B x

C y

D The number does not belong in this graphic.

SpiralEd Solutions

Spiral 82

1 (6.2D)

Ella estimates that the length of her foot is 24 cm. Which of the following numbers is closest to Ella's estimate?

F 23.09 cm

G 24.41 cm

H 23.68 cm

J 24.86 cm

2 (6.2E)

James has twenty pieces of candy to share equally among himself and four friends. Which expression does NOT equal the amount of candy each person receives?

A $5\overline{)20}$

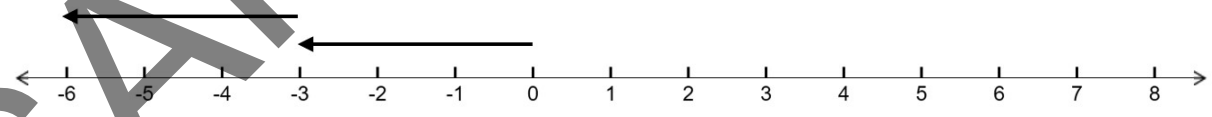
B $\frac{5}{20}$

C $20 \div 5$

D $\frac{20}{5}$

3 (6.3C)

A math tutor shows her students the model below.



The model does NOT represent which of the following operations?

F -3×2

G $-3 + (-3)$

H $2 \times (-3)$

J $3 \times (-2)$

SpiralEd Solutions

Spiral 83

1 (6.3E)

Two hiking trails lead to the bottom of the Grand Canyon. One trail is $9\frac{1}{2}$ miles long. The other trail is $\frac{2}{3}$ as long as the first. What is the length of the second trail?

A 6 miles

B $6\frac{1}{2}$ miles

C $6\frac{2}{3}$ miles

D $6\frac{1}{3}$ miles

2 (6.3D)

A teacher wrote this expression on the board.

$$28 - (-5) + 17$$

What is the value of the expression?

F 40

G 50

H 44

J 37

3 (6.3A)

To divide a number by $-2\frac{3}{8}$, you can multiply the number by which of the following?

A $-\frac{13}{8}$

B $-\frac{8}{19}$

C $-\frac{8}{13}$

D $-\frac{19}{8}$

SpiralEd Solutions

Spiral 84

1 (6.3B)

Which of the following statements is NOT true?

F $\frac{5}{3} \times 24 > 24$

G $30 \times \frac{7}{5} > 30$

H $\frac{2}{3} \times 12 > 12$

J $81 \times \frac{4}{9} < 81$

2 (6.4C)

A bag of 24 buttons contains

- 6 red buttons
- 12 blue buttons
- 2 yellow buttons
- 4 green buttons

Which statement is true?

A The number of blue buttons is 2 more than the number of red buttons.

B The number of red buttons is $\frac{1}{3}$ times the number of yellow buttons.

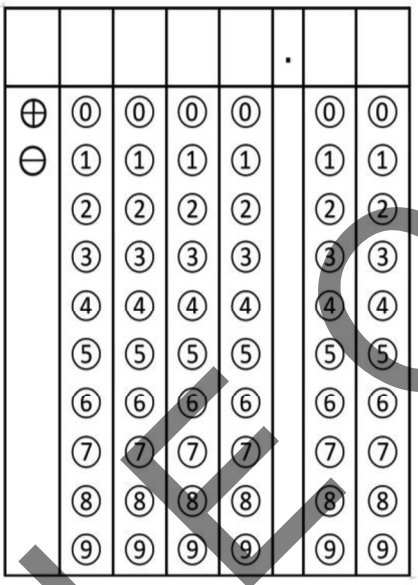
C The number of yellow buttons is $\frac{1}{2}$ times the number of blue buttons.

D The number of blue buttons is 2 times the number of red buttons.

3 (6.4D)

A rancher buys a 60-pound sack of feed for $24.00. What is the cost per pound?

Record your answer and fill in the bubbles. Be sure to use the correct place value.



SpiralEd Solutions

Spiral 85

1 (6.4B)

A bag contains red, blue, green, and yellow marbles. Sixteen marbles are drawn from the bag.

- 4 red
- 4 blue
- 5 green
- 3 yellow

If the bag contains 45 green marbles, predict how many marbles are in the bag.

A 144

B 210

C 214

D 120

2 (6.4A)

Look at the table below.

x	-3	-2	-1	0	1
y	-6	-4	-2	0	2

Which statement is true about the data in the table?

F The value of *y* can be represented by a function in the form $y = ax$, because each *y*-value is *a* times as large as the corresponding *x*-value.

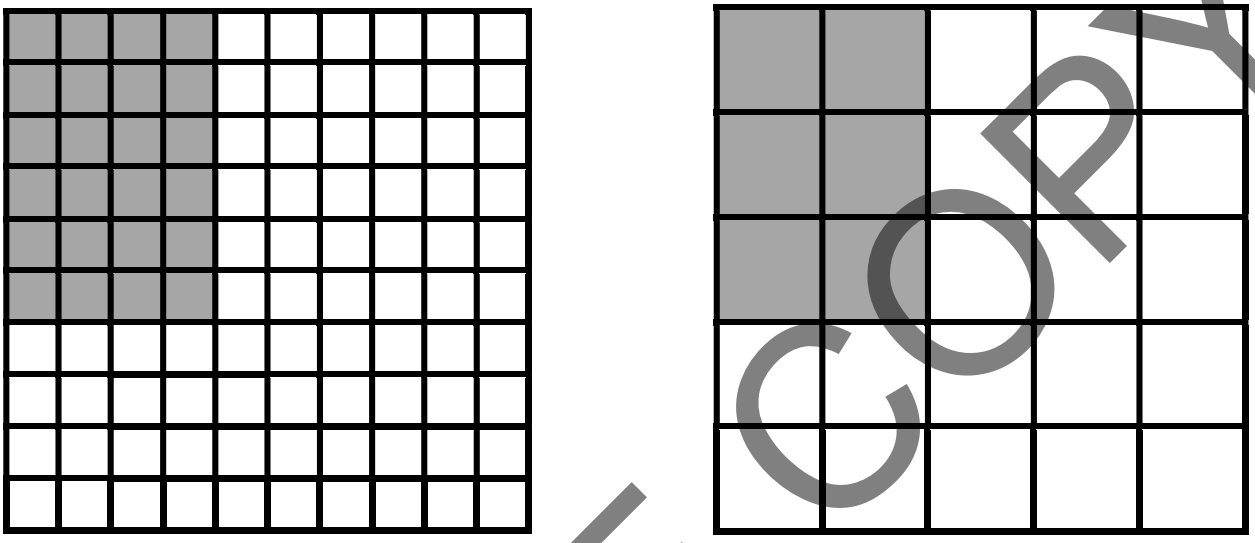
G The value of *y* can be represented by a function in the form $y = x + a$, because each *y*-value is *a* more than the corresponding *x*-value.

H The value of *y* can be represented by a function in the form $y = ax$, because each *y*-value is *a* more than the corresponding *x*-value.

J The value of *y* can be represented by a function in the form $y = x + a$, because each *y*-value is *a* times as large as the corresponding *x*-value.

3 (6.5C)

The shaded areas show equal parts of the same whole.



Which equality correctly represents the shaded areas?

A $25\% = \frac{25}{100} = \frac{6}{25}$

B $22\% = \frac{22}{100} = \frac{6}{25}$

C $25\% = \frac{25}{100} = \frac{6}{24}$

D $24\% = \frac{24}{100} = \frac{6}{25}$

SpiralEd Solutions

Spiral 86

1 (6.4E)

Sixth graders at Middleton Middle School show a 23.5% increase in test scores. How is this written as a decimal?

F 23.5

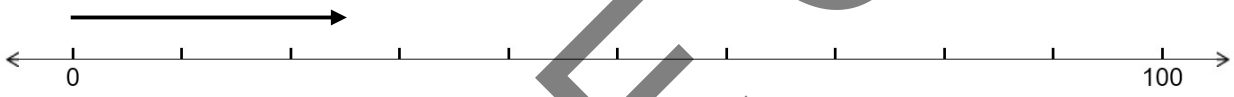
G 2.35

H 0.235

J 0.0235

2 (6.4F)

The number line represents the percentage of sixth graders taking theater as an elective.



Which decimal best represents this amount?

A 0.2

B 0.3

C 0.25

D 2.5

3 (6.4G)

In the first six months of a baby's life his weight increases by 210%. What decimal is equivalent to the percent a baby's weight increases in the first six months?

F 0.21

G 2.01

H 0.021

J 2.1

SpiralEd Solutions

Spiral 87

1 (6.5B)

Fifty-one percent of emergency room visits are due to falls. If 2,400 people visit the emergency room, how many of those visits are due to falls?

A 1,422

B 1,242

C 2,142

D 1,224

2 (6.7A)

Which of the following prime factorizations creates the smallest number?

F $2^4 \cdot 3 \cdot 5$

G $2^5 \cdot 3 \cdot 5^2$

H $2^3 \cdot 3^2 \cdot 5$

J $2^2 \cdot 3^2 \cdot 5^2$

3 (6.7B)

Which of the following is NOT an equation?

A $\frac{3}{5}(x+10)-12$

B $x-5=12$

C $\frac{3}{5}(x+10)=12$

D $-21=x-15$

SpiralEd Solutions

Spiral 88

1 (6.7C)

Which pair of expressions is equivalent?

F $\frac{1}{2}(4x+6)-2x+3$ and $-2(2x-3)$

G $2(-3x-4)+3$ and $6x+5$

H $\frac{1}{3}(6x-12)+2x$ and $4(x-1)$

J $-7+\frac{2}{5}(-5x-15)$ and $-7-\frac{2}{5}(5x-15)$

2 (6.7D)

Which expression is equivalent to $2.4+(5.7+4.33)$?

A $3.4 \cdot (5.7+4.33)$

B $4.33 \cdot (3.4+5.7)$

C $(2.4+5.7) \cdot 4.33$

D $(2.4+5.7)+4.33$

3 (6.9A)

A wrestler must lose at least 27 pounds in two weeks to meet his weight goal for a match. Which equation can he use to determine the number of pounds, p, he must lose each day to meet or exceed his goal?

F $14 \geq \frac{27}{p}$

G $14 \leq \frac{p}{27}$

H $14p \geq 27$

J $14 \leq \frac{27}{p}$

SpiralEd Solutions

Spiral 89

1 (6.9C)

Claire wrote the equation $8 - x = 2$. Which situation is best represented by this equation?

A After hiking 8 miles of her *x*-mile hike, Claire had 2 miles remaining.

B Claire hiked her *x*-mile hike at a rate of 8 miles every 2 hours.

C After hiking *x* miles of her 8-mile hike, Claire had 2 miles remaining.

D Claire hiked her 8-mile hike at a rate of 2 miles each day for *x* days.

2 (6.10A)

Max ran the 50-yard dash in 8 seconds. He can use the equation $50 = r \times 8$ to determine his rate, *r*, in yards per second. What is Max's rate in yards per second?

F 6.5 yards per second

G 5.75 yards per second

H 7 yards per second

J 6.25 yards per second

3 (6.10B)

Which equation has a solution of $\frac{7}{12}$ for *n*?

A $n + \frac{2}{3} = \frac{5}{6}$

B $\frac{5}{8}n = 15$

C $\frac{4}{5}n = \frac{7}{15}$

D $-4.8 = \frac{n}{3}$

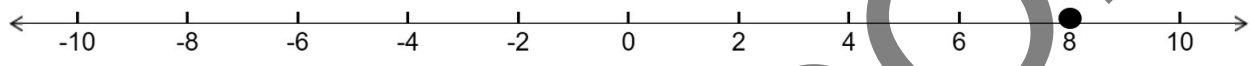
SpiralEd Solutions

Spiral 90

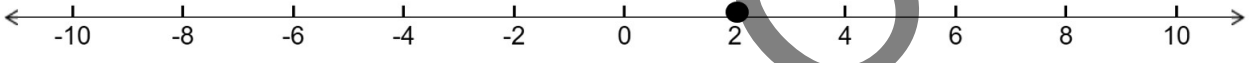
1 (6.9B)

Savannah solved the equation $4 = \frac{x}{2}$ and graphed the solution on a number line. Which number line shows the solution to Lincoln's equation?

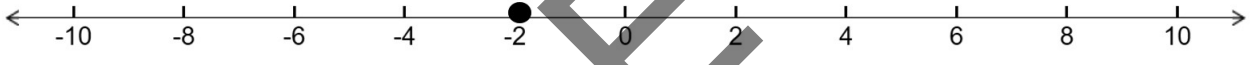
F



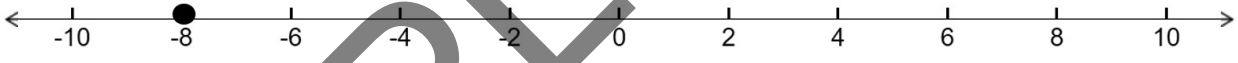
G



H

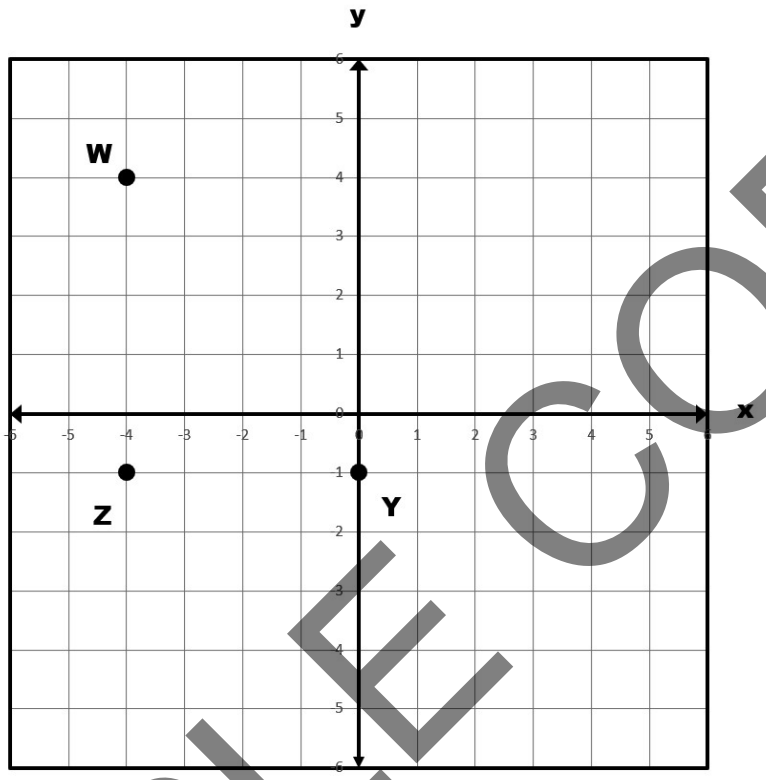


J



2 (6.11)

Points *W*, *Y*, and *Z* form three vertices of a rectangle.



Which ordered pair represents the coordinates for point *X*, the fourth vertex of the rectangle?

A (0, 4)

B (-1, -4)

C (4, 0)

D (4, 1)

3 (6.6A)

The table shows the relationship between the total cost of camping and the number of nights spent camping.

Camping Fees

Number of nights	1	3	6	8
Total cost	$20	$60	$120	$160

Which statement about the relationship is NOT true?

F 1, 3, 6, and 8 are the independent quantities.

G The number of nights depends on the total cost.

H 20, 60, 120, and 160 are the dependent quantities.

J The total cost depends on the number of nights.

SpiralEd Solutions

Spiral 91

1 (6.6B)

The table shows the relationship between *r*, the number of roses purchased, and C, the total cost of the roses.

Number of Roses, *r*	Total Cost, *C*
1	$5.50
4	$14.50
8	$26.50
12	$38.50

Which equation represents the relationship in the table?

A $C = 3r + 2.5$

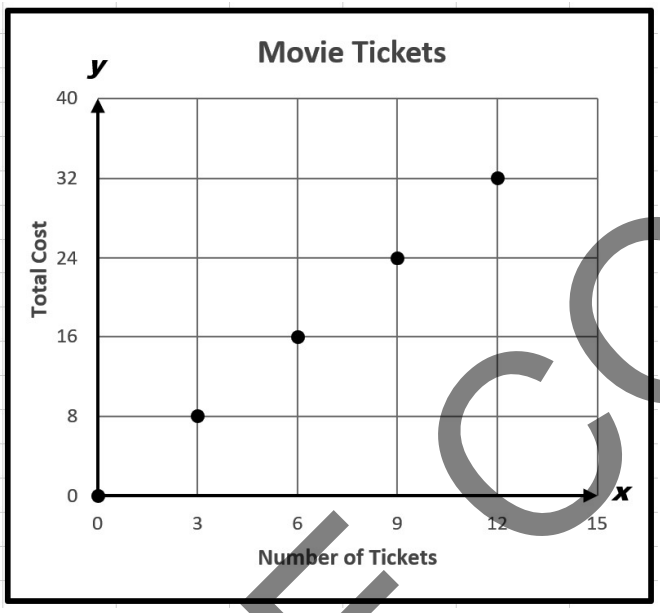
B $C = 2.5r + 3$

C $C = 5.5r$

D $C = 2.5r - 3$

2 (6.6C)

The graph shows the total cost, *y*, for movie tickets, based on the number of tickets purchased, *x*.



Which equation best represents the relationship between *x* and *y*?

F $y = \frac{8}{3}x$

G $y = \frac{3}{8}x$

H $y = 3x + 8$

J $y = 8x + 3$

3 (6.14A)

The table shows the monthly fees for the checking accounts at two banks.

Checking Account Fees

Bank	Monthly Fee
W	$10 per month
X	free checking for the first three months; $12 per month after the first three months

What information can the customer use to help him decide which account is the better option for him?

A After 18 months the two accounts will cost the same.

B Up to 12 months, Bank W is the less expensive option.

C Up to 18 months, Bank X is the less expensive option.

D Up to 24 months, Bank X is the less expensive option.

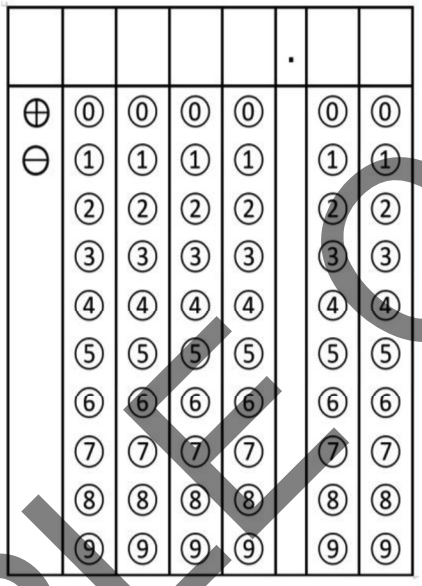
SpiralEd Solutions

Spiral 92

1 (6.8A)

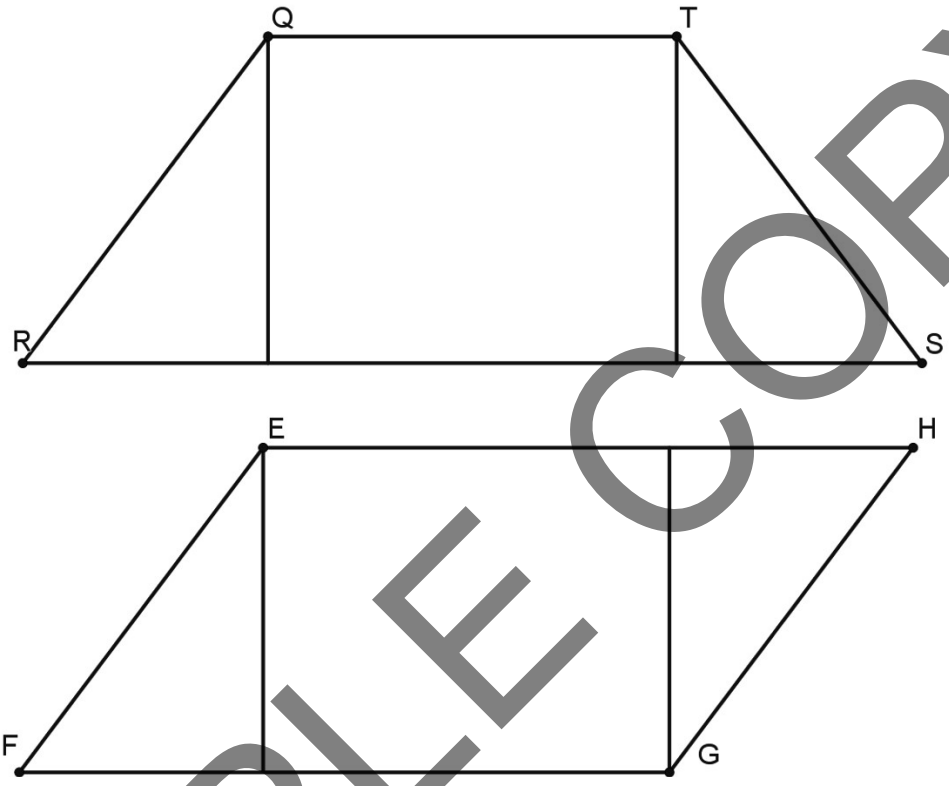
In triangle ABC the measure of angle ABC is 77°, and the measure of angle BCA is 42°. What is the measure of angle CAB?

Record your answer and fill in the bubbles. Be sure to use the correct place value.



2 (6.8B)

Amelia measures the base and height of each figure below and determines they have the same area.



Amelia can use this information to demonstrate the relationship between which pair of formula?

A $A = bh$ and $V = bh$

B $A = \frac{1}{2}bh$ and $A = \frac{1}{2}(b_1 + b_2)h$

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

D $A = \frac{1}{2}(b_1 + b_2)h$ and $A = bh$

3 (6.14C)

The check register shows Becca's balance at the beginning of the day on March 1.

Date	Description	Deposits (dollars)	Withdrawals (dollars)	Balance (dollars)
				$1,425.87
3/1	phone bill			
3/1	electric bill			
3/1	paycheck			
3/1	rent			

During the day Becca pays her phone bill for $127.53 and her electric bill for $87.55. She deposits her paycheck of $3,456.80 She then pays her rent for $1,239.00. What is Becca's balance at the end of the day?

F $4,755.14

G $3,428.59

H $1,298.34

J $5,994.14

SpiralEd Solutions

Spiral 93

1 (6.8C)

The area of a triangle is A square centimeters. If the height of the triangle is 6 centimeters, which equation represents b, the base of the triangle?

A $b = \frac{1}{2}A + 6$

B $b = \frac{A}{6}$

C $b = \frac{A}{3}$

D $b = 3A$

2 (6.8D)

Ben completed the chart below, showing the dimensions and area of four rectangles.

Rectangle	Length	Width	Area
A	15.4 in.	41.2 in.	634.84 in^2
B	17.3 in.	24.6 in.	425.58 in^2
C	25.6 in.	35.8 in.	916.48 in^2
D	32.5 in.	55.5 in.	1803.75 in^2

Which rectangle is NOT shown with the correct area?

F Rectangle A

G Rectangle B

H Rectangle C

J Rectangle D

3 (6.14H)

Ellen is interested in studying medicine after high school. She researches varies jobs in the medical field and creates the table below.

Occupation	Average Salary	Education Required
Medical Records Clerk	$31,960	high school diploma
Licensed Vocational Nurse	$58,070	two-year certification
Lab Technician	$61,070	two-year certification
Registered Nurse	$61,734	college degree
Physician's Assistant	$98,764	master's degree
Physician	$193,310	doctoral degree

What conclusion can Ellen draw from the information she gathered?

A Most medical jobs require little or no training.

B With a two-year certificate she can increase her annual salary by over $20,000.

C Registered Nurses make as much or more than Physician's Assistants.

D All jobs in medicine require at least a four-year degree.

SpiralEd Solutions

Spiral 94

1 (6.12C)

The list shows the height, in feet, of giant redwood trees, the tallest trees on Earth.

350, 329, 351, 345, 342, 348, 338, 356, 345

What is the median height of the trees in feet?

F 345 feet

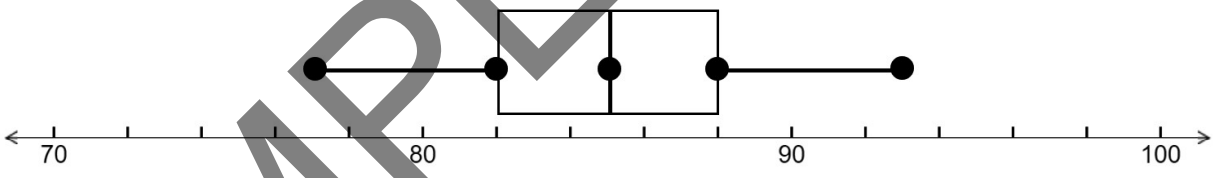
G 344.4 feet

H 310.5 feet

J 350 feet

2 (6.12B)

The boxplot represents data for the test scores of nine students.



Which statement is true?

A The boxplot shows outliers at both ends.

B The boxplot is symmetrical.

C The boxplot is skewed left.

D The boxplot is skewed right.

3 (6.14E)

A car dealer requests a current credit report for Mr. Swenson before making him a car loan. Which of the following information will be included in the report?

F Mr. Swenson's Social Security number

G the amount Mr. Swenson owes on any credit card accounts

H Mr. Swenson's date of birth

J all of the above

SpiralEd Solutions

Spiral 95

1 (6.12A)

The stem-and-leaf plot records the weights of nine sixth graders.

Student Weight

Stem	Leaf
8	4 5
9	1 3 6
10	3 8 9

KEY
5|2 = 52

Which set of data matches the stem and leaf plot?

A 84, 85, 91, 93, 96, 103, 108, 109

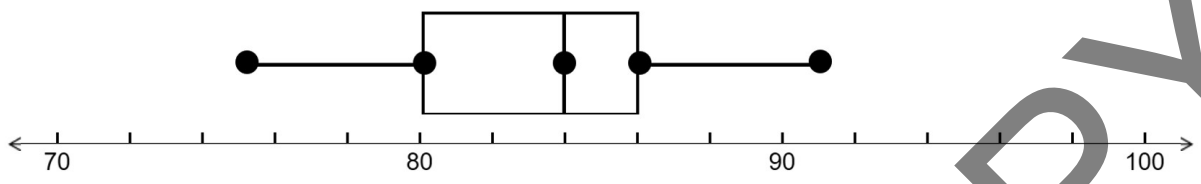
B 84, 85, 90, 93, 97, 103, 108, 109

C 84, 85, 91, 93, 96, 102, 108, 109

D 84, 85, 91, 92, 96, 103, 108, 109

2 (6.13A)

The box plot summarizes the daily high temperature for Austin, Texas for the month of April.



Which statement best describes the data represented in the box plot?

F The median temperature is 84°F.

G The interquartile range is 16.

H The maximum temperature is 90.5°F.

J The daily high was below 82°F for more than half the month.

3 (6.14G)

Alberto is using several methods to pay for college. Which method of payment will have to be repaid?

A grant

B loan

C scholarship

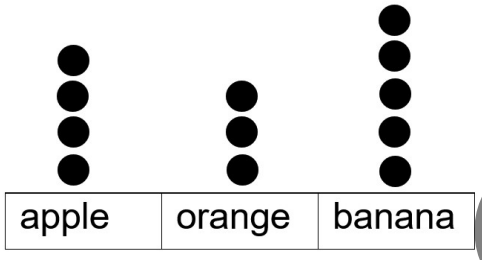
D savings

SpiralEd Solutions

Spiral 96

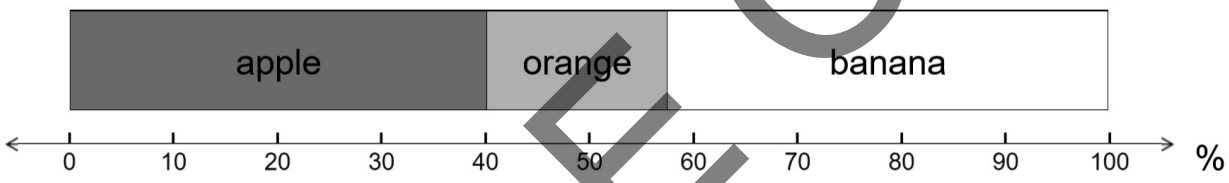
1 (6.12D)

The dot plot shows the fruit each student chose for a snack.

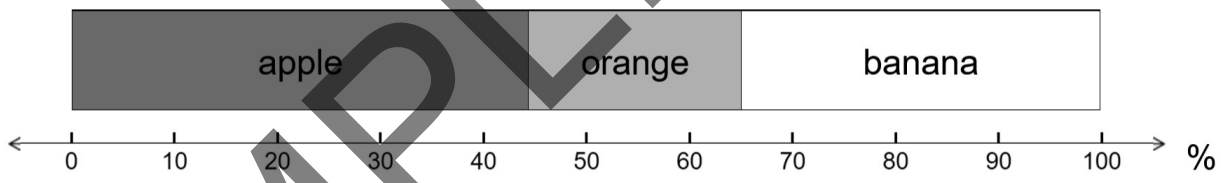


Which percentage bar graph represents the data in the dot plot?

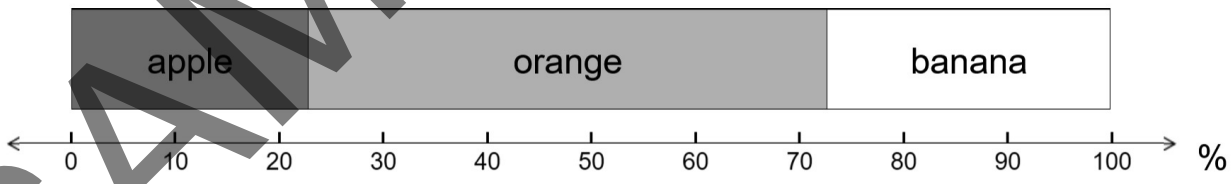
F



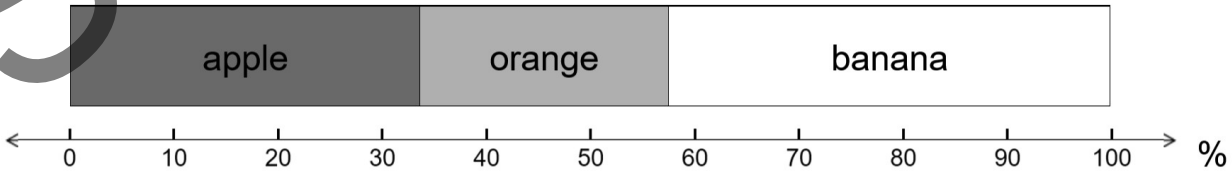
G



H

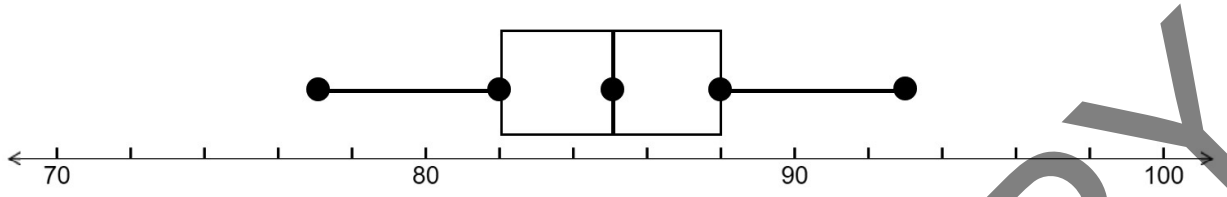


J



2 (6.12B)

The boxplot represents data for the test scores of nine students.



Which statement is NOT true?

A The boxplot shows outliers at both ends.

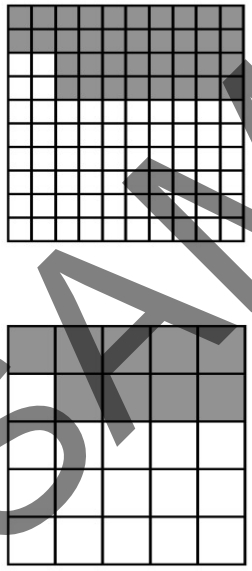
B The boxplot is symmetrical.

C The boxplot is not skewed.

D The median of the data is located halfway between the minimum and maximum score.

3 (6.5C)

The shaded areas show equal parts of the same whole.



Which equality correctly represents the shaded areas?

F $36\% = \frac{36}{100} = \frac{9}{25}$

G $38\% = \frac{38}{100} = \frac{9}{25}$

H $25\% = \frac{25}{100} = \frac{6}{24}$

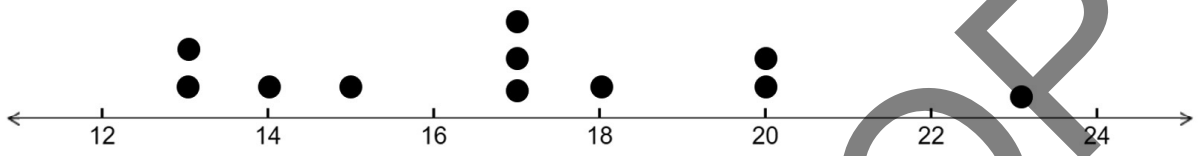
J $24\% = \frac{24}{100} = \frac{6}{25}$

SpiralEd Solutions

Spiral 97

1 (6.12D)

The dot plot shows the ages of students taking an online math class.



What is the mode of the data?

A 17

B 23

C 17.2

D 20

2 (6.12D)

The stem and leaf graph shows student grades on a math quiz.

Quiz Scores

Stem	Leaf
8	2 3 4 5 6
9	3 9 9
10	0

KEY
5 2 = 52

What is the most common score?

F 86

G 93

H 18

J 99

3 (6.14H)

For a class project Jake researched jobs in medicine. The information he gathered is shown in the chart.

Occupation	Average Salary	Education Required
Medical Records Clerk	$31,960	high school diploma
Licensed Vocational Nurse	$58,070	two-year certification
Lab Technician	$61,070	two-year certification
Registered Nurse	$61,734	college degree
Physician's Assistant	$98,764	master's degree
Physician	$193,310	doctoral degree

How much more will a Registered Nurse earn over a ten-year period than a Licensed Vocational Nurse?

A $3,664.00

B $366,640.00

C $36,640.00

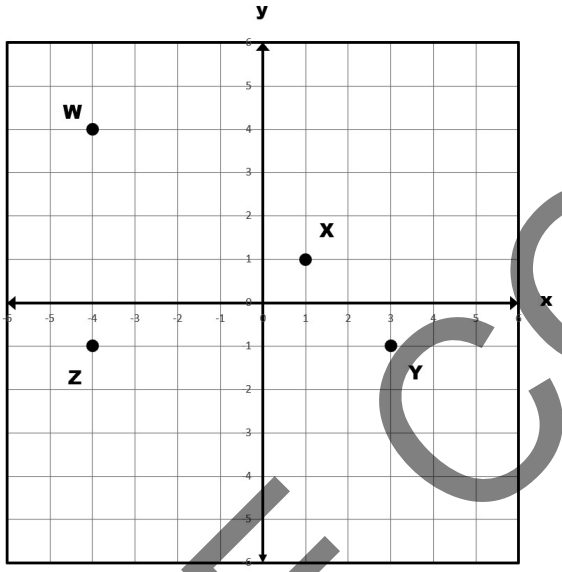
D $366.40

SpiralEd Solutions

Spiral 98

1 (6.11)

The coordinate grid shows four points.



Which ordered pair represents a point that is NOT in the same quadrant as point *Z*?

F (-3, -8)

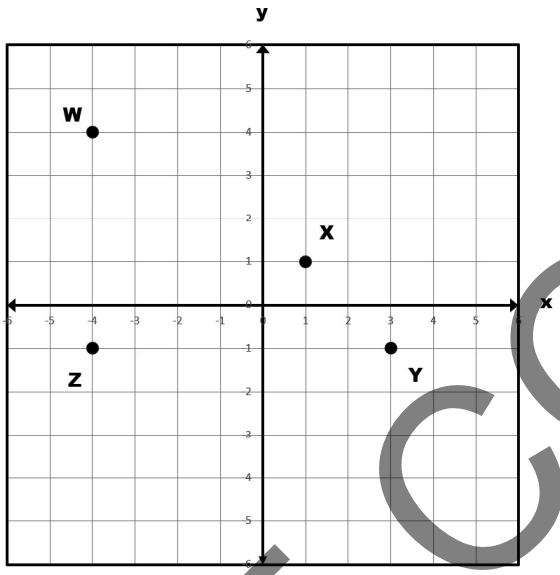
G (-2, -4)

H (-5, 3)

J (-4, -6)

2 (6.11)

The coordinate grid shows four points.



Which ordered pair represents a point that is NOT in the same quadrant as point *Y*?

A (3, -8)

B (2, -4)

C (5, -3)

D (-4, -6)

3 (6.12C)

The list shows the height, in feet, of giant redwood trees, the tallest trees on Earth.

350, 329, 351, 345, 342, 348, 338, 356, 345

What is the range of the tree heights?

F 5

G 18

H 27

J 345

SpiralEd Solutions

Spiral 99

1 (6.12C)

The list shows the mass in grams of five rock samples.

18.2, 19.4, 26.8, 22.6, 18.0

What is the mean of the data?

A 26.8

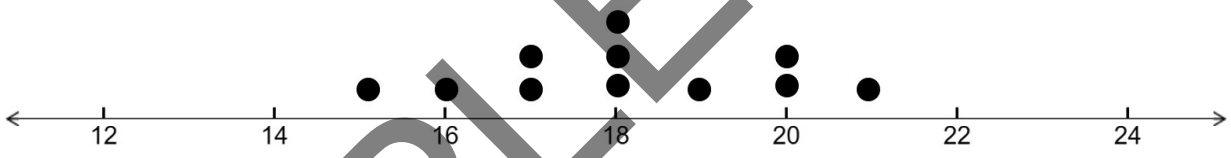
B 21

C 8.8

D 23

2 (6.12C)

The dot plot shows the ages of students taking a driver's education course.



What is the median age?

F 18

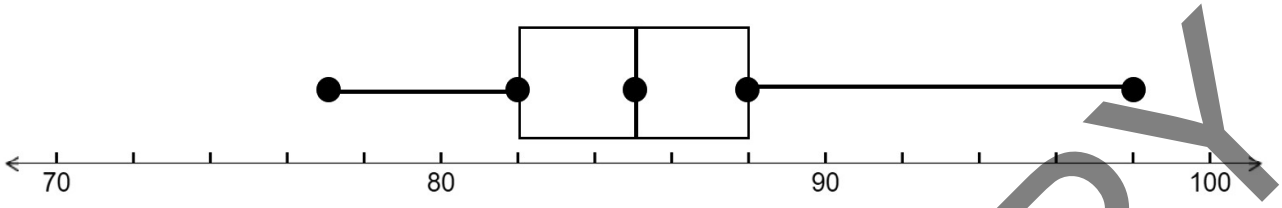
G 18.1

H 19

J 17.8

3 (6.12C)

The boxplot represents data for the weights of sixth grade students.



What is the median of the data?

A 82.5

B 82

C 85

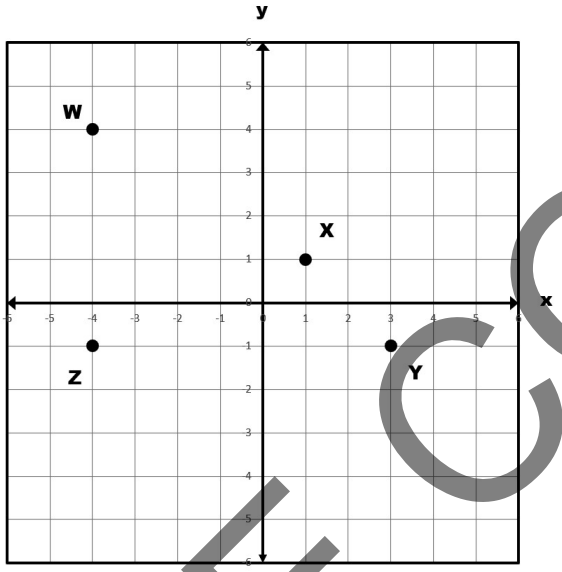
D 81

SpiralEd Solutions

Spiral 100

1 (6.11)

The coordinate grid shows four points.



Which ordered pair represents a point that is in the same quadrant as point *W*?

F (-3, -8)

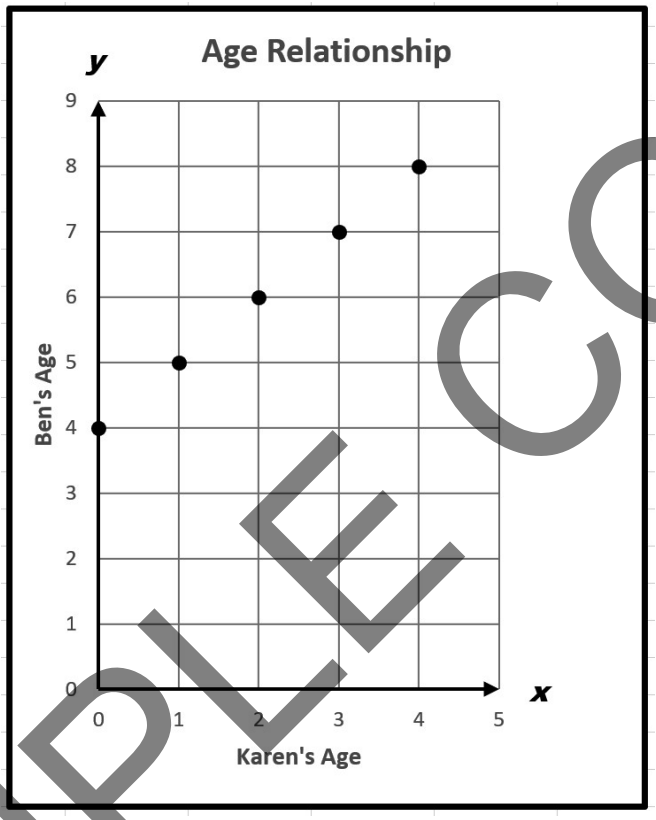
G (-2, 4)

H (5, 3)

J (4, -6)

2 (6.6C)

Karen is four years younger than her cousin, Ben. The graph shows the relationship between Ben's age, *y*, and Karen's age, *x*.



Which equation best represents the relationship between *x* and *y*?

A $y = 4x$

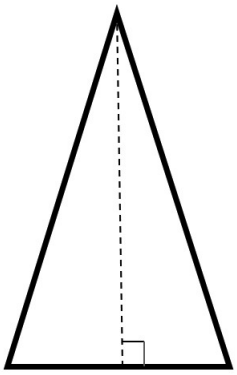
B $y = x + 4$

C $x = y + 4$

D $x = 4y$

3 (6.8D)

Daneya measured the isosceles triangle below.



She determined that the length of the base is 10 cm, the height is 12 cm, and the length of each side is 13 cm. What is the area of the triangle?

Record your answer and fill in the bubbles. Be sure to use the correct place value.

					.		
⊕	0	0	0	0		0	0
⊖	1	1	1	1		1	1
	2	2	2	2		2	2
	3	3	3	3		3	3
	4	4	4	4		4	4
	5	5	5	5		5	5
	6	6	6	6		6	6
	7	7	7	7		7	7
	8	8	8	8		8	8
	9	9	9	9		9	9

SpiralEd Solutions

Spiral 101

1 (6.12C)

The list shows the mass in grams of five rock samples.

18.2, 19.4, 26.8, 22.6, 18.0

What is the median mass?

A 26.8

B 21

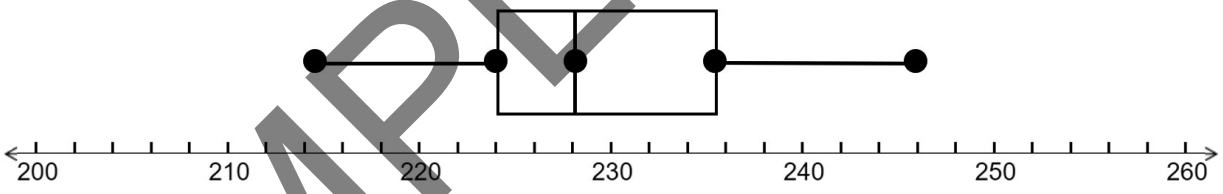
C 8

D 19.4

2 (6.13A)

7

The school auditorium seats 250 people. The box plot summarizes the attendance for the fall theater production.



Which statement best describes the data represented in the box plot?

F The theater was sold out for three nights.

G Attendance ranged from 212 to 243.

H The median attendance was 228 people.

J The attendance was greater than 220 for all but 6 nights.

3 (6.13A)

The ages of the teachers in Smithville Middle School is represented by the stem-and-leaf plot.

Teacher Age

Stem	Leaf
2	2
3	2 4 5 7 7
4	1 4 6 8

KEY
5|2 = 52

Which statement best describes the data represented in the stem-and-leaf plot?

A The median age is 35.

B The mean age is 35.

C Thirty percent of the teachers are over 45.

D Thirty percent of the teachers are under 35.

SpiralEd Solutions

Spiral 102

1 (6.12D)

The stem and leaf plot shows the weights of 9 Great Dane dogs.

Great Dane Weight

Stem	Leaf
8	0 2 3
9	2 2 6 8
10	1 5

KEY
5|2 = 52

What is the mode of the data?

F 83

G 25

H 92

J 92.1

2 (6.12D)

The animal shelter kept a record of the animals adopted over a three-month period.

Animal	Number of Adoptions
dog	126
cat	98
horse	39
other	27

Which relative frequency table corresponds to the data?

A

Animal	Number of Adoptions
dog	54%
cat	28%
horse	12%
other	6%

B

Animal	Number of Adoptions
dog	44%
cat	32.7%
horse	12%
other	11.3%

C

Animal	Number of Adoptions
dog	33.8%
cat	13.4%
horse	32.7%
other	20.1%

D

Animal	Number of Adoptions
dog	43.4%
cat	33.8%
horse	13.4%
other	9.3%

3 (6.13B)

Which of the following situations would yield the most variability in the data collected?

F A scientist measures the amount of water in a beaker in milliliters.

G A scientist calculates the time it takes one snail to travel 12 meters.

H A scientist calculates the growth rate for twenty different species of plants over 15 weeks.

J A scientist counts the number of test tubes available in the lab during one annual inventory.

SpiralEd Solutions

Spiral 103

1 (6.13B)

Which of the following situations would yield the most variability in the data collected?

A During one annual physical a doctor records a patient's temperature.

B During one annual physical a doctor records a patient's weight.

C During each annual physical a doctor measures the height of a patient from age 21 to age 40.

D During each annual physical a doctor measures the height of a patient from birth until age 18.

2 (6.10A)

Gabriella measured the length of one side of a square, and determined the perimeter of the square to be 27.2 centimeters. What is the length of the side of the square, *x*, in centimeters, if $4x = 27.2$?

F 5.4 cm

G 8.2 cm

H 6.8 cm

J 6.4 cm

3 (6.10A)

Bella measured the length of one side of a hexagon, and determined the perimeter of the hexagon to be 34.8 inches. What is the length of one side of the hexagon, *x*, in inches, if $6x = 34.8$?

A 5.2 inches

B 5.8 inches

C 4.8 inches

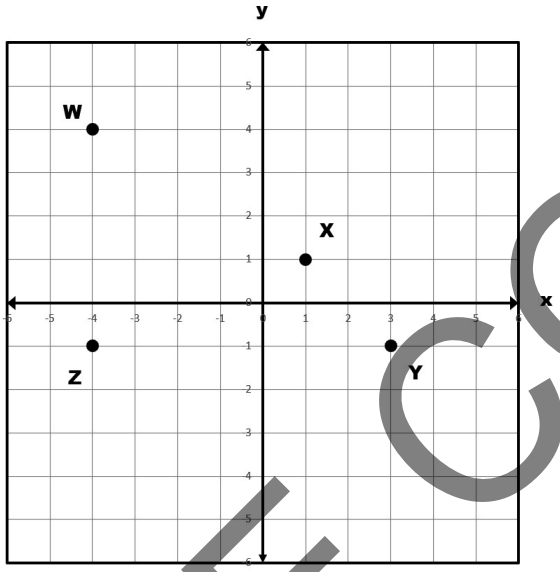
D 6.2 inches

SpiralEd Solutions

Spiral 104

1 (6.11)

The coordinate grid shows four points.



If point *W* is translated five units down and six units to the right to create W_1? Which ordered pair is in the same quadrant as W_1?

F (-3, 8)

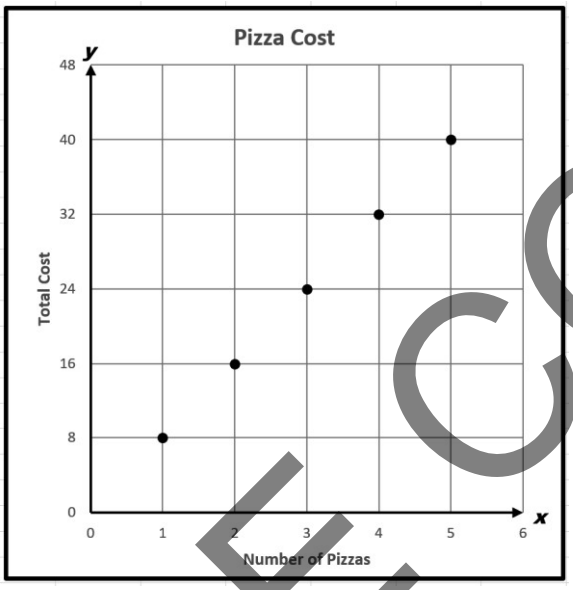
G (-2, -4)

H (5, 3)

J (4, -6)

2 (6.6C)

A medium single-topping pizza costs $8.00. The graph shows the relationship between, *y*, the cost of pizza, in relation to *x*, the number of pizzas purchased.



Which equation best represents the relationship between *x* and *y*?

A $y = x + 8$

B $y = 8x + 1$

C $y = 8x$

D $y = \frac{x}{8}$

3 (6.10B)

Which equation has a solution of 64 for x?

F $-3.6x = 72$

G $\frac{x}{12} = \frac{2}{3}$

H $\frac{1}{6} + x = -\frac{2}{3}$

J $\frac{3}{8}x = 24$

.

SpiralEd Solutions

Spiral 105

1 (6.2D)

Jodi estimates that the length of her foot is 26 cm. Which of the following numbers is closest to Jodi's estimate?

A 25.09 cm

B 25.41 cm

C 25.68 cm

D 26.96 cm

2 (6.2D)

Adrian is thinking of a number between 46.08 and 47.3. Which of the following could be Adrian's number?

F 46.032

G 47.01

H 47.401

J 45.98

3 (6.13A)

The number of pounds of peaches picked by 8 workers are represented by the stem-and-leaf plot.

Pounds of Peaches

Stem	Leaf
8	4 5
9	1 3 6
10	3 8 9

KEY
5|2 = 52

Which statement best describes the data represented in the stem-and-leaf plot?

A Twenty-five percent of the workers picked less than 90 pounds of peaches.

B The median number is 93.

C The range of the data is 26.

D Half of the workers picked more than 100 pounds of peaches.

SpiralEd Solutions

Spiral 106

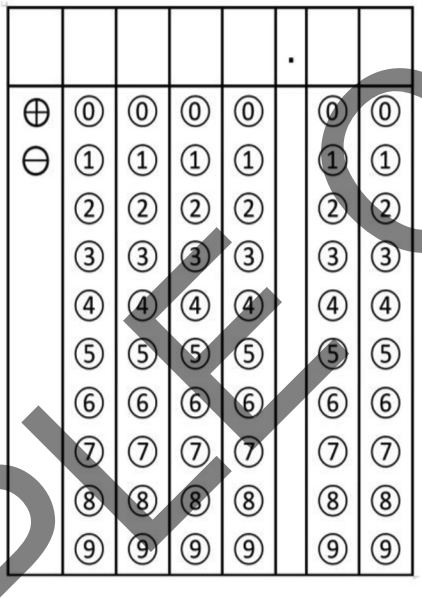
1 (6.12C)

The list shows the mass in grams of five rock samples.

18.2, 19.4, 26.8, 22.6, 18.0

What is the range of the data?

Record your answer and fill in the bubbles. Be sure to use the correct place value.



2 (6.12D)

Students voted for their favorite pet.

Pet	Votes
dog	8
cat	6
fish	2
bird	2
other	3

Which relative frequency table corresponds to the data?

A

Pet	Votes
dog	32%
cat	30%
fish	12%
bird	12%
other	14%

B

Pet	Votes
dog	38%
cat	28.6%
fish	9.5%
bird	9.5%
other	14.3%

C

Pet	Votes
dog	26.9%
cat	29%
fish	7.2%
bird	7.2%
other	15%

D

Pet	Votes
dog	41.1%
cat	22%
fish	8%
bird	8%
other	20.9%

3 (6.14A)

The table shows the charges for using a two different debit cards.

Debit Card Fees

Card	Transaction Fee
C	the first 10 transactions per month free; 0.02% charge on cash withdrawals beyond the first 10
D	first 5 transactions per month free; 0.01% charge on cash withdrawals beyond the first 5

What additional information can the customer use to help him decide which debit card is the better option for him?

F the number of transactions the customer plans to make each month

G the average amount of money withdrawn per transaction

H neither A, nor B

J both A and B

SpiralEd Solutions

Spiral 107

1 (6.3D)

A meteorologist charted the temperature change in Nome, Alaska every four hours over a 24-hour period in degrees Celsius. The table shows the changes he recorded.

Time	Change in Temperature
4:00 AM	-2 degrees
8:00 AM	+4 degrees
12:00 PM	+2 degrees
4:00 PM	-2 degree
8:00 PM	-4 degrees
12:00 AM	-2 degrees

If the beginning temperature was -28^0C what was the final temperature?

A -34^0C

B -33^0C

C -32^0C

D -30^0C

2 (6.14C)

The check register shows Ezekiel's balance at the beginning of the day on October 10.

Date	Description	Deposits (dollars)	Withdrawals (dollars)	Balance (dollars)
				$1,500.00
10/10	groceries		$123.90	
10/10	phone		$89.73	
10/10	savings		$75.00	
10/10	credit card		$189.00	

During the day Ezekiel writes a check at the grocery store for $123.90. He pays his phone bill for $89.73. He transfers $75 into his savings account, and pays his credit card bill for $189. What is Ezekiel's balance at the end of the day?

F $1,286.37

G $2,841.37

H $1,841.37

J $1,022.37

3 (6.14E)

Dr. Anderson reviews her current credit report. Which information is included in her report, but does not affect her credit score?

A how many credit card accounts she has

B her date of birth

C her credit payment history

D the account balance on her auto loan

SpiralEd Solutions

Spiral 108

1 (6.4B)

The ratio men to women working as electricians is 5:2. If there are 255 men, how many of the electricians are women?

F 120

G 637

H 102

J 125

2 (6.2D)

A math teacher asked students to list numbers greater than $1\frac{1}{2}$? Students suggest the numbers below:

$$-2 \qquad -3\frac{2}{3} \qquad 9 \qquad 1\frac{3}{5} \qquad \frac{7}{2}$$

Which numbers are greater than $1\frac{1}{2}$?

A All of the suggested numbers.

B 9, $1\frac{3}{5}$, and $\frac{7}{2}$

C 9 and $1\frac{3}{5}$ only

D $-3\frac{2}{3}$ and $1\frac{3}{5}$ only

3 (6.14F)

Which of the following parts of a credit report would be most beneficial to a lender?

F the borrower's Social Security number

G the borrower's current address

H the borrower's date of birth

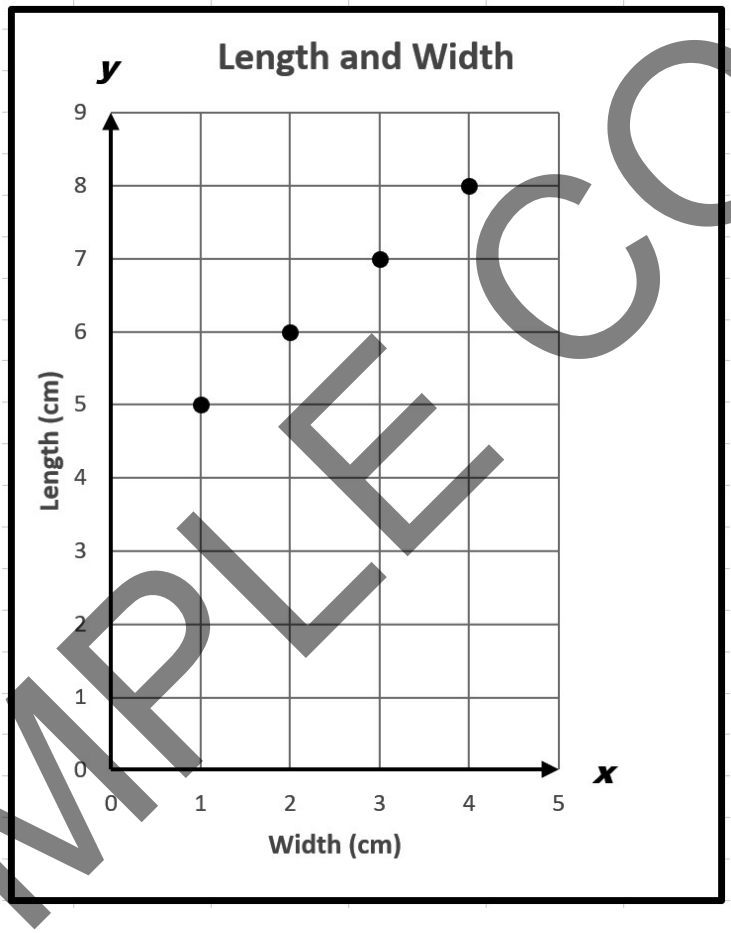
J the borrower's history of past due payments or bankruptcy

SpiralEd Solutions

Spiral 109

1 (6.6C)

The length of a rectangle is four centimeters greater than the width. The graph shows the relationship between the length, *y*, and the width, *x*.



Which equation best represents the relationship between *x* and *y*?

A $y = 4x$

B $y = x + 4$

C $x = y + 4$

D $x = 4y$

2 (6.12D)

Students voted for their favorite pet.

Pet	Votes
dog	10
cat	8
fish	1
bird	2
other	3

Which relative frequency table corresponds to the data?

F

Pet	Votes
dog	42%
cat	30%
fish	12%
bird	12%
other	13%

G

Pet	Votes
dog	41.7%
cat	33.3%
fish	4.2%
bird	8.3%
other	12.5%

H

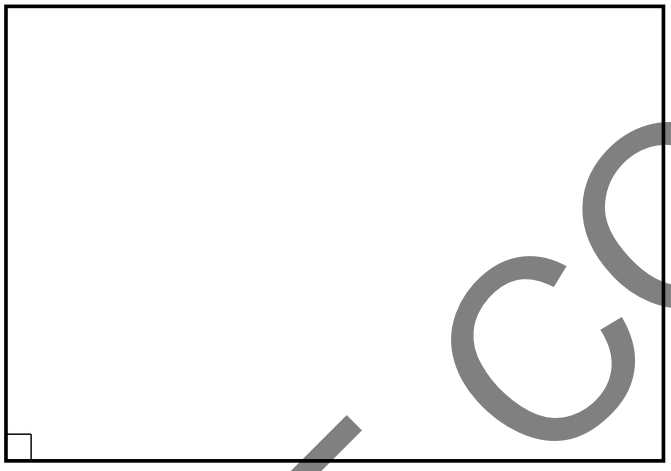
Pet	Votes
dog	41.7%
cat	33.3%
fish	7.2%
bird	7.2%
other	12.5%

J

Pet	Votes
dog	41.1%
cat	22%
fish	8%
bird	8%
other	20.9%

3 (6.8D)

The rectangle below represents the base of a rectangular prism. Rayshard measures the dimensions of the rectangle to the nearest centimeter.



If the height of the prism is 17 cm, what is the volume of the prism in cubic centimeters?

Record your answer and fill in the bubbles. Be sure to use the correct place value.

					.		
⊕	⓪	⓪	⓪	⓪		⓪	⓪
⊖	①	①	①	①		①	①
	②	②	②	②		②	②
	③	③	③	③		③	③
	④	④	④	④		④	④
	⑤	⑤	⑤	⑤		⑤	⑤
	⑥	⑥	⑥	⑥		⑥	⑥
	⑦	⑦	⑦	⑦		⑦	⑦
	⑧	⑧	⑧	⑧		⑧	⑧
	⑨	⑨	⑨	⑨		⑨	⑨

SpiralEd Solutions

Spiral 110

1 (6.6C)

Carly writes a situation that can describe the relationship between all the values of *x* and *y* in the table.

x	*y*
3	8
5	10
7	12
9	14

Which situation best describes the relationship between all the values of *x* and *y* in the table?

F Kimberly is five years older than her cousin, Adelle.

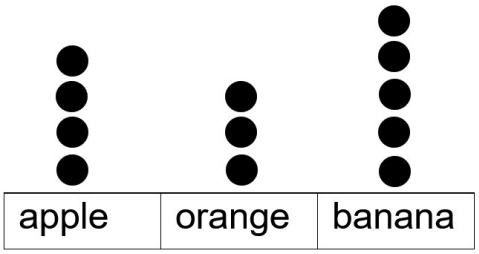
G Jake read eight books for every three books his friend read.

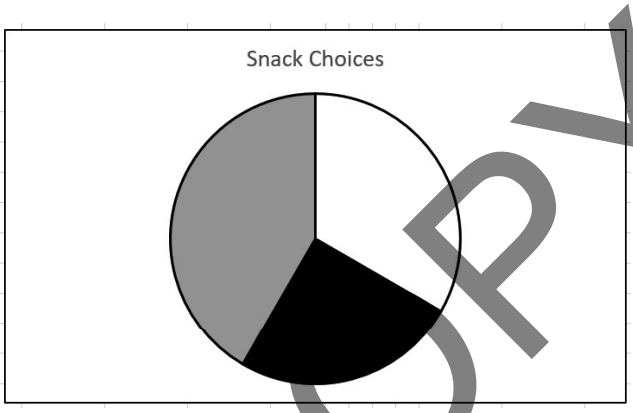
H In three years a satellite will make eight complete orbits.

J Movie goers can by three tickets for every eight dollars spent.

2 (6.12D)

The dot plot and pie chart show the fruit each student chose for a snack.





Which key matches the pie chart?

A

KEY	
Apple	
Orange	
Banana	

B

KEY	
Apple	
Orange	
Banana	

C

KEY	
Apple	
Orange	
Banana	

D

KEY	
Apple	
Orange	
Banana	

3 (6.14E)

Mr. Dennison review his current credit report. Which information included in the report actually affects his credit score?

F his date of birth

G his Social Security number

H his credit payment history

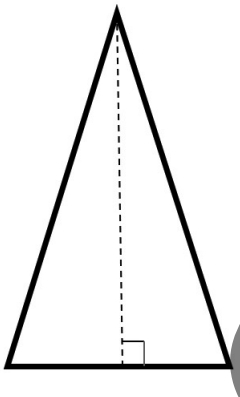
J his employment information

SpiralEd Solutions

Spiral 111

1 (6.8D)

Cam measured the isosceles triangle below.



He determined that the length of the base is 20 cm, the height is 24 cm, and the length of each side is 26 cm.

What is the area of the triangle in square centimeters?

A 480 cm^2

B 260 cm^2

C 240 cm^2

D 250 cm^2

2 (6.14A)

The table shows the monthly fees for the checking accounts at two banks.

Checking Account Fees

Bank	Monthly Fee
W	free checking for the first six months; $15 per month after the first six months
X	free checking for the first three months; $12 per month after the first three months

What information can the customer use to help him decide which account is the better option for him?

F After 18 months the two accounts will cost the same.

G Up to 12 months, Bank X is the less expensive option.

H Up to 18 months, Bank W is the less expensive option.

J Up to 24 months, Bank X is the less expensive option.

3 (6.14F)

Which of the following parts of a credit report would be most beneficial to a lender?

A the borrower's Social Security number

B the borrower's current address

C the borrower's history of credit payments

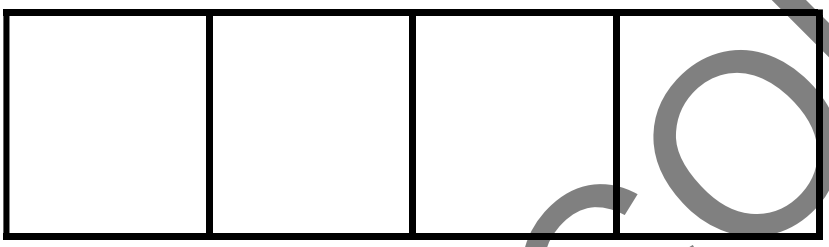
D the borrower's date of birth

SpiralEd Solutions

Spiral 112

1 (6.8D)

Mary Leigh bought a candy bar and divided it into four equal pieces to share with her three friends.



If the dimensions of the whole candy bar are 6 inches by 1.5 inches, what is the area of each of the four pieces?

F 9 in^2

G 4.5 in^2

H 6 in^2

J 2.25 in^2

2 (6.14C)

The check register shows Michael's balance at the beginning of the day on June1.

Date	Description	Deposits (dollars)	Withdrawals (dollars)	Balance (dollars)
				$1,500.00
6/1	phone bill			
6/1	gas bill			
6/1	paycheck			
6/1	rent			
6/1	transfer to savings			

During the day Michael pays his phone bill for $87.53 and his gas bill for $27.42. He deposits his paycheck of $1,456.80 He then pays his rent for $950.00 and transfers $50 to his savings account. What is Michael's balance at the end of the day?

A $1,891.85

B $2,841.85

C $1,841.85

D $3,741.85

3 (6.14G)

Randall is using several methods to pay for college. Which method will require Randall to have a campus job?

F grant

G loan

H work-study

J savings

SpiralEd Solutions

Spiral 113

1 (6.13A)

The reading grades of sixth grade students are represented by the stem-and-leaf plot.

Reading Grades

Stem	Leaf
8	2 3 4 5 6
9	3 9 9
10	0

KEY
5|2 = 52

Which statement best describes the data represented in the stem-and-leaf plot?

A The range of the data is 22 points.

B The median grade is 86.

C One-third of the students scored below 85.

D Over half of the students scored above 90.

2 (6.14E)

Janet is concerned that her credit score is too low to get a loan for a car. How long will the information in her credit history be retained?

F 2 years

G until all her debt is paid

H 10 years

J 7 years

3 (6.14G)

Alexandria is a member of the National Honor Society, Future Farmers of America, and theater. Being a member of each of these organizations might help Alexandria obtain what money toward college?

A savings

B work-study

C loans

D scholarships

SpiralEd Solutions

Spiral 114

1 (6.10A)

Christian found the sum of two angles of a triangle to equal 119°. To determine the measure of the third angle, *m*, Christian used the equation $m + 119 = 180$. What is the measure of the third angle in degrees?

F 61°

G 51°

H 69°

J 59°

2 (6.14H)

Jason learns to weld in his high school ag class and decides he wants to pursue a career in welding. He discovers that without a certificate his job opportunities are limited, and he will only earn about $16.00 an hour. With two-years of training and a certificate, he will earn about $36.00 an hour. If Jason works 40 hours per week for 50 weeks each year, what is the difference between his annual income with and without a certificate?

A $32,000

B $72,000

C $40,000

D $24,000

3 (6.14A)

The table shows the charges for using a two different debit cards at an ATM.

Debit Card ATM Fees

Card	Transaction Fee
W	$2 per transaction
X	first 5 transactions per month free; $3 per transaction after the first 5

What information can the customer use to help him decide which debit card is the better option for him?

F the number of transactions the customer plans to make at an ATM each month

G the PIN number on his debit card

H the amount of cash the customer plans to withdraw in each transaction

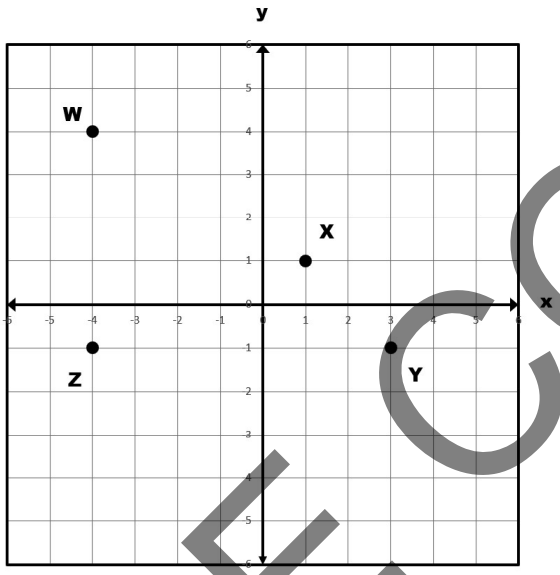
J the amount of cash the customer plans to maintain in the account

SpiralEd Solutions

Spiral 115

1 (6.11)

The coordinate grid shows four points.



If point *Z* is translated two units up and six units to the right to create Z_1? Which ordered pair is in the same quadrant as Z_1?

A (-3, 8)

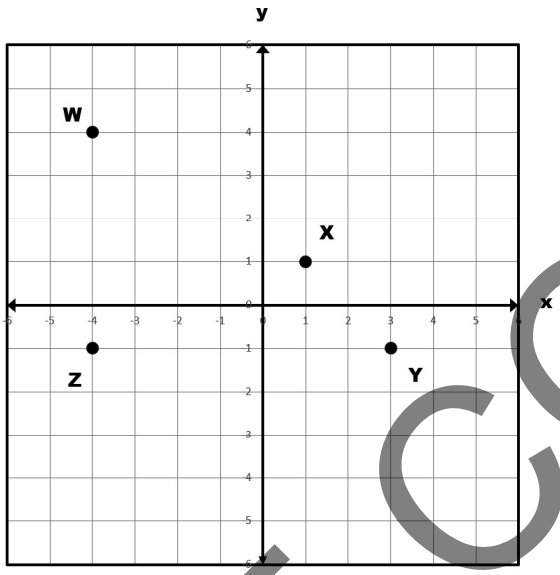
B (-2, -4)

C (5, 3)

D (4, -6)

2 (6.11)

The coordinate grid shows four points.



If point *X* is translated two units down and six units to the left to create X_1? Which ordered pair is in the same quadrant as X_1?

F (-3, 8)

G (-2, -4)

H (5, 3)

J (4, -6)

3 (12C)

The stem and leaf plot shows the weights of eight sixth grade PE students.

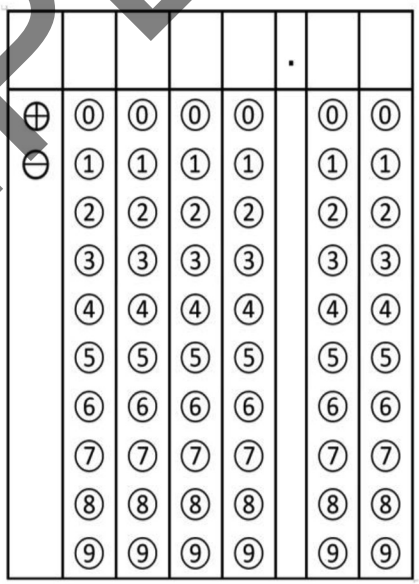
Student Weight

Stem	Leaf
8	4 5
9	1 3 6
10	3 8 10

KEY
5|2 = 52

What is the median weight?

Record your answer and fill in the bubbles. Be sure to use the correct place value.



SpiralEd Solutions

Spiral 116

1 (6.6C)

The table shows the total number of laps run, *r*, and the number of days spent running, *d*.

d	*r*
3	75
5	125
7	225
9	325

Which statement is true, based on the information in the table?

F The number of laps run increases by 25 each day.

G The runner completes 25 laps each day.

H Each lap is 75 meters in length.

J As the number of days increases, the number of laps decreases.

2 (6.6C)

The table shows the length of a side of a rectangle, *y*, in relation to the width of the rectangle, *x*.

x	*y*
3	21
5	23
7	25
9	27

Which statement is true, based on the information in the table?

A The length is seven times the width.

B The width is seven times the length.

C The length is 18 more than the width.

D The length is 18 less than the width.

3 (6.6C)

The table shows the number of miles driven, *y*, in relation to the gallons of gas consumed, *x*.

x	*y*
2	48
5	120
8	192
11	264

Which statement is true, based on the information in the table?

F The car averages 46 miles per gallon.

G The car can travel 144 miles on 4 gallons.

H The length is 18 more than the width.

J The car averages 24 miles per gallon.

SpiralEd Solutions

Spiral 117

1 (6.8D)

Amber used an interactive graphing program to "stretch" a parallelogram, maintaining the height and side measurements while increasing the length of the base. She used her investigation to complete the table below.

Parallelogram	Base	Height	Area
W	k cm	8.2 cm	41 cm^2
X	6.5 cm	8.2 cm	m cm^2
Y	n cm	8.2 cm	57.4 cm^2
Z	9.2 cm	8.2 cm	p cm^2

Which of the following measurements is NOT correct?

A $p = 74.55$ cm^2

B $k = 5$ cm

C $n = 7$ cm

D $m = 53.3$ cm^2

2 (6.8D)

Juan measures the trapezoid below to the nearest centimeter to determine its area.

What is the area of the trapezoid to the nearest square centimeter?

Record your answer and fill in the bubbles. Be sure to use the correct place value.

					.		
⊕	⓪	⓪	⓪	⓪		⓪	⓪
⊖	①	①	①	①		①	①
	②	②	②	②		②	②
	③	③	③	③		③	③
	④	④	④	④		④	④
	⑤	⑤	⑤	⑤		⑤	⑤
	⑥	⑥	⑥	⑥		⑥	⑥
	⑦	⑦	⑦	⑦		⑦	⑦
	⑧	⑧	⑧	⑧		⑧	⑧
	⑨	⑨	⑨	⑨		⑨	⑨

3 (6.14F)

Because Ginger's family cannot afford her college tuition, Ginger applies for a work-study program, grants, and scholarships. She tries hard to avoid loans. What is the primary advantage of work-study, grants, and scholarships over loans?

A The loans must be repaid, and the other methods of financing do not.

B Being part of a work-study program will allow Ginger to meet new people.

C Scholarships will look better on her school record.

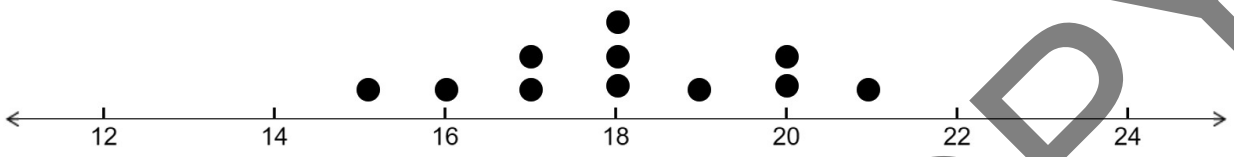
D Grants show that she has a financial need.

SpiralEd Solutions

Spiral 118

1 (6.12C)

The dot plot shows the ages of students taking a driver's education course.



What is the mean age?

F 18

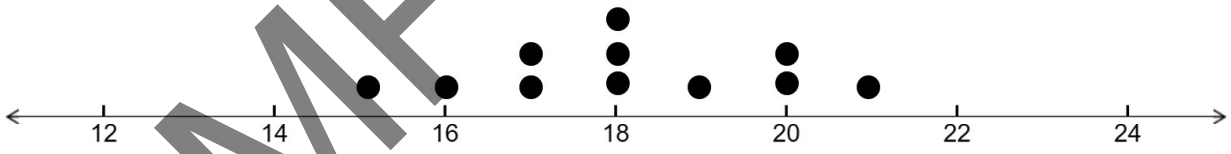
G 18.1

H 19

J 17.8

2 (6.12C)

The dot plot shows the ages of students taking a driver's education course.



What is the range of the data?

A 5

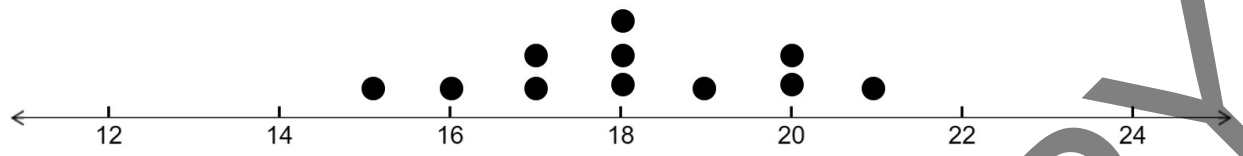
B 7

C 6

D 3

3 (6.12C)

The dot plot shows the ages of students taking a driver's education course.



What is the interquartile range of the data?

F 5

G 7

H 6

J 3

SpiralEd Solutions

Spiral 119

1 (6.12C)

The table shows the results of an experiment timing four cars rolling down a ramp. Each car was tested five times.

Car	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5
One	2.5 sec.	2.4 sec.	2.3 sec.	2.3 sec.	2.4 sec.
Two	2.2 sec.	2.3 sec.	2.1 sec.	2.2 sec.	2.2 sec.
Three	3 sec.	3.1 sec.	2.8 sec	3 sec.	3.2 sec
Four	2.4 sec.	2.5 sec.	2.2 sec	2.1 sec.	2 sec.

Which data set has the greatest mean?

A Car One

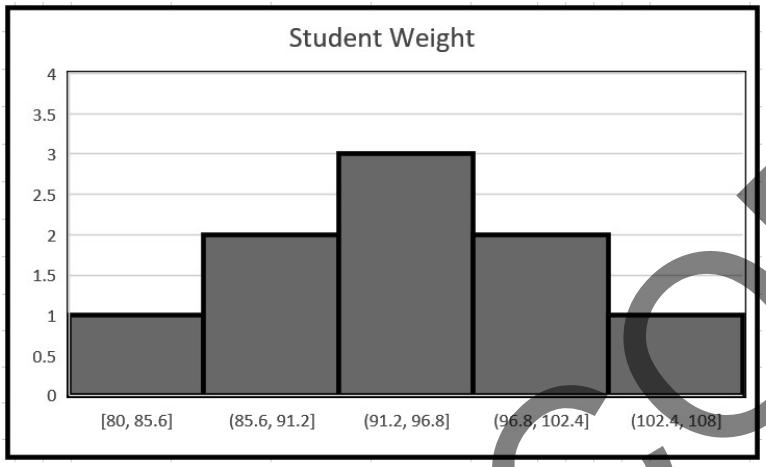
B Car Two

C Car Three

D Car Four

2 (6.13A)

The histogram shows the weight ranges of nine sixth grade students.



Which statement best describes the data represented in the histogram?

F There are more boys than girls in the class.

G No student weighs less than 81 pounds.

H Most of the students weigh more than 90 pounds.

J The coach chose not to weigh 3 students.

3 (12C)

The table shows the results of an experiment timing four cars rolling down a ramp. Each car was tested five times.

Car	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5
One	2.5 sec.	2.4 sec.	2.3 sec.	2.3 sec.	2.4 sec.
Two	2.2 sec.	2.3 sec.	2.1 sec.	2.2 sec.	2.2 sec.
Three	3 sec.	3.1 sec.	2.8 sec	3 sec.	3.2 sec
Four	2.4 sec.	2.5 sec.	2.2 sec	2.1 sec.	2 sec.

Which data set has the greatest range?

A Car One

B Car Two

C Car Three

D Car Four

SpiralEd Solutions

Spiral 120

1 (6.12D)

Bailey has 3 red t-shirts, 5 blue t-shirts, and 4 white t-shirts. Which list shows the correct percentages to correspond to the number of t-shirts Bailey has of each color?

F red – 20%, blue – 30%, white – 50%

G red – 25%, blue – 30%, white – 45%

H red – 25%, blue – $33.\overline{3}\%$, white – $41.\overline{6}\%$

J red – 25%, blue – $41.\overline{6}\%$, white – $33.\overline{3}\%$

2 (6.14C)

The check register shows Ben's balance at the beginning of the day on November 5.

Date	Description	Deposits (dollars)	Withdrawals (dollars)	Balance (dollars)
				$857.22
11/5	groceries		$42.90	
11/5	phone		$78.99	
11/5	savings		$75.00	
11/5	deposit	$153.99		

During the day Ben writes a check at the grocery store for $42.90. He pays his phone bill for $78.99. He transfers $75 into his savings account. He deposits a check for $153.99 that he earned working part time. What is Ben's balance at the end of the day?

A $660.33

B $814.32

C $735.33

D $1,022.37

3 (6.14F)

Which of the following parts of a credit report would be least beneficial to a lender?

A the borrower's account history and status

B the borrower's history of past due or late payments

C the borrower's date of birth

D the borrower's credit score