TENNESSEE

Standards Review and Assessment
Grade 8

HOUGHTON MIFFLIN HARCOURT

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1 2 3 4 5 6 7 8 9 10 1689 19 18 17 16 15 14 13 12 11 10

4500000000 A B C D E F G

Contents

To the Student

These practice activities are correlated to the state performance indicators for grade 8 and are designed to prepare you to take Tennessee's grade 8 assessment test. The practice tests reflect the type of wording likely to be encountered on the actual test.

Mathematics State Performance Indicators

GRADE 8

Standard 1—Mathematical Processes

State Performance Indicators:

SPI 0806.1.1 Solve problems involving rate/time/distance (i.e., d = rt).

SPI 0806.1.2 Interpret a qualitative graph representing a contextual situation.

SPI 0806.1.3 Calculates rates involving cost per unit to determine the best buy.

Standard 2—Number & Operations

State Performance Indicators:

SPI 0806.2.1 Order and compare rational and irrational numbers and locate on the number line.

SPI 0806.2.2 Identify numbers and square roots as rational or irrational.

SPI 0806.2.3 Use scientific notation to compute products and quotients.

SPI 0806.2.4 Solve real-world problems requiring scientific notation.

Standard 3—Algebra

State Performance Indicators:

SPI 0806.3.1 Find solutions to systems of two linear equations in two variables.

SPI 0806.3.2 Solve the linear equation $f(x) = g(x)$.

SPI 0806.3.3 Solve and graph linear inequalities in two variables.

SPI 0806.3.4 Translate between various representations of a linear function.

SPI 0806.3.5 Determine the slope of a line from an equation, two given points, a table or a graph.

SPI 0806.3.6 Analyze the graph of a linear function to find solutions and intercepts.

SPI 0806.3.7 Identify, compare and contrast functions as linear or nonlinear.

Standard 4—Geometry & Measurement

State Performance Indicators:

SPI 0806.4.1 Use the Pythagorean Theorem to solve contextual problems.

SPI 0806.4.2 Apply the Pythagorean theorem to find distances between points in the coordinate plane to measure lengths and analyze polygons and polyhedra.

SPI 0806.4.3 Find measures of the angles formed by parallel lines cut by a transversal.

SPI 0806.4.4 Convert between and within the U.S. Customary System and the metric system.

SPI 0806.4.5 Identify the intersection of two or more geometric figures in the plane.

Mathematics State Performance Indicators (continued)

Standard 5—Data Analysis, Statistics, & Probability

State Performance Indicators:

SPI 0806.5.1 Calculate probabilities of events for simple experiments with equally probable outcomes.

SPI 0806.5.2 Use a variety of methods to compute probabilities for compound events (e.g., multiplication, organized lists, tree diagrams, area models).

SPI 0806.5.3 Generalize the relationship between two sets of data using scatterplots and lines of best fit.

SPI 0806.5.4 Recognize misrepresentations of published data in the media.

Name _____ Date _____

Pre Test

1 One mile equals 5,280 feet and 1 minute equals 60 seconds. What speed, in feet per second, equals 60 miles per hour?

A 88 ft/s

B 84 ft/s

C 76 ft/s

D 72 ft/s

2 Given: $\begin{cases} f(x) = \frac{2x}{3} \\ g(x) = x - 2 \end{cases}$

If $f(x) = g(x)$, what is the value of x?

F 0

G 2

H 4

J 6

3 Simplify $(3.1 \times 10^{-2})(-5.6 \times 10^{3})$.

A -1.736×10^{-2}

B -1.736×10^{2}

C 1.736×10^{-2}

D 1.736×10^{2}

4 A store offers four brands of disposable razors. Which brand has the least cost per unit?

F Cutter, Inc.
8 razors for $6.80

G The Blade Company
9 razors for $7.70

H Sharpe, Co.
10 razors for $8.50

J FuzzNoMor
12 razors for $9.60

GO ON

Name _____ Date _____

Pre Test (continued)

5 Dr. Chronos ran a 12-kilometer race last year, in a time of 51 minutes. This year Dr. Chronos would like to run the same race in 0.75 hours. How many kilometers per hour should Dr. Chronos run to complete the race in 0.75 hours? [$D = rt$]

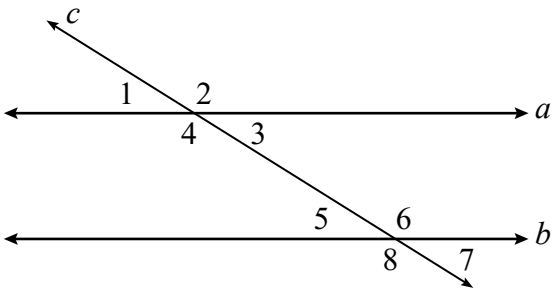
A 16 km/h

B 15.5 km/h

C 14 km/h

D 13.5 km/h

6 In the diagram below, lines a and b are parallel. The measure of $\angle 1$ is 32°.



What is the measure of $\angle 6$?

F 32°

G 58°

H 118°

J 148°

7 Maya has 3 times as many trading cards as Jeff has. Together Jeff and Maya have 44 cards. How many cards does Maya have?

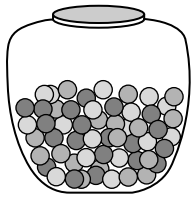
A 11

B 22

C 33

D 44

8 There are 100 marbles in a jar and only 4 of them are red.



What is the probability of <u>not</u> drawing a red marble?

F 1.04

G 0.96

H 0.4

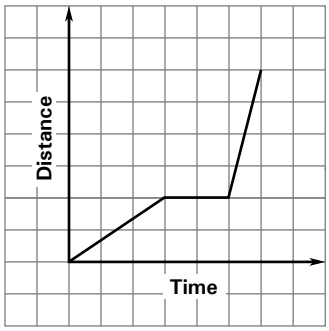
J 0.04

GO ON

Name _____ Date _____

Pre Test (continued)

9 Jessie goes on a bicycle ride. The graph below shows the distance and length of time she rides.



Based on the graph, which best describes Jessie's ride?

A She rides at a constant rate with one rest break.

B She rides at a constant rate with no rest breaks.

C She rides at a slow rate, takes a rest break, and then rides at a faster rate.

D She rides a fast rate, takes a rest break, and then rides at a slower rate.

10 The publisher of a daily newspaper is planning to include a graph in each edition it prints. One such graph will show the hourly temperatures during the previous 24 hours.

What type of graph is the most appropriate way to display data?

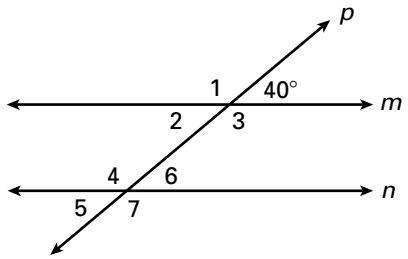
F a bar graph

G a stem-and-leaf plot

H a line graph

J a circle graph

11 In the diagram below, lines m and n are parallel.



Which angles have a measure of 40°?

A $\angle 1$, $\angle 3$, $\angle 4$, and $\angle 7$

B $\angle 2$, $\angle 5$, and $\angle 6$

C $\angle 2$ only

D $\angle 5$ and $\angle 6$ only

12 Marti's salary is \$10 per hour. Doug's salary is \$8 per hour. Doug also gets \$40 for expenses each week. Last week, Marti and Doug earned the same amount. How many hours did they each work last week?

F 4

G 5

H 20

J 40

GO ON

Name _____ Date _____

Pre Test (continued)

13 What is the slope of the line that represents the equation $y = -\frac{4}{3}x + \frac{9}{5}$?

A $-\frac{9}{5}$

B $-\frac{4}{3}$

C $\frac{4}{3}$

D $\frac{9}{5}$

14 A right triangle has a hypotenuse of length 5 meters and one leg of length 2 meters. Which is closest to the length of the other leg?

F 3.8 m

G 4.6 m

H 5.3 m

J 5.9 m

15 Elsie pays $54.02 to put 14.6 gallons of gas in her tank. Which other filling cost works out to the same price per gallon?

A $45.22 for 11.9 gallons

B $46.99 for 12.7 gallons

C $48.60 for 13.5 gallons

D $52.36 for 15.4 gallons

16 Suppose a cat is going to give birth to a litter of kittens. The probability of a kitten being a male is $\frac{1}{2}$ and the probability of a kitten being a female is $\frac{1}{2}$. What is the probability that a litter of five kittens contains all male kittens?

F $\frac{1}{64}$

G $\frac{1}{32}$

H $\frac{1}{4}$

J $\frac{1}{2}$

GO ON

Name _____ Date _____

Pre Test (continued)

17 Between which two integers is the square root of 60?

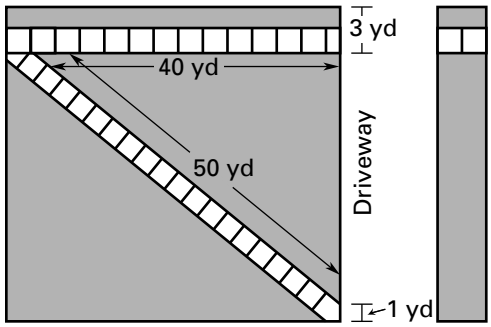
A between 5 and 6

B between 6 and 7

C between 7 and 8

D between 8 and 9

18 A new sidewalk is installed in front of a school so that students have a shorter distance to walk to the school parking lot, as shown below.



Parking lot

What is the length of the driveway, to the nearest yard?

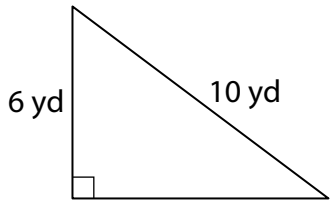
F 30 yd

G 34 yd

H 40 yd

J 44 yd

19 Find the missing measure.



A 4 yd

B 8 yd

C 9 yd

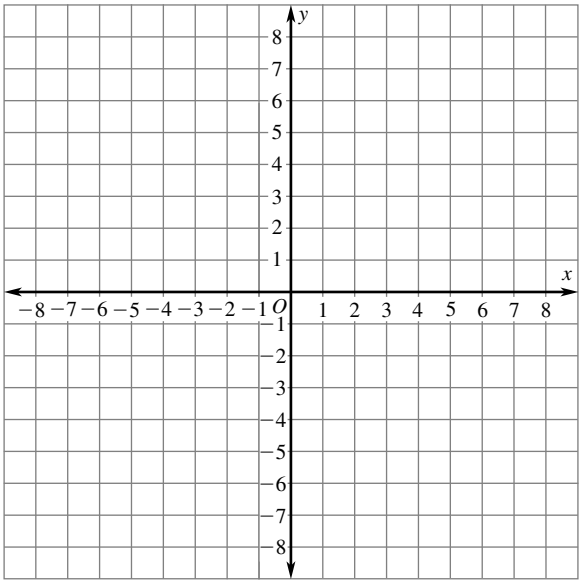
D 64 yd

GO ON

Name _____ Date _____

Pre Test (continued)

20 The vertices of rectangle $WXYZ$ are given below.
$W(-3, 4)$ $X(3, 4)$ $Y(3, -1)$ $Z(-3, -1)$
Plot the rectangle. Then use the Pythagorean Theorem to find the length of $\overline{XZ}$ to the nearest tenth.



F 3.3 units

G 6 units

H 7.8 units

J 8 units

21 A group of hikers covered 14 miles in 4 hours. At this rate, how many miles can they go if they hike for 6 hours the next day?

A 18

B 20

C 21

D 24

22 Line a passes through points $(2, -11)$ and $(-6, 45)$. What is the slope of line a?

F -7

G $-\frac{51}{13}$

H $\frac{51}{13}$

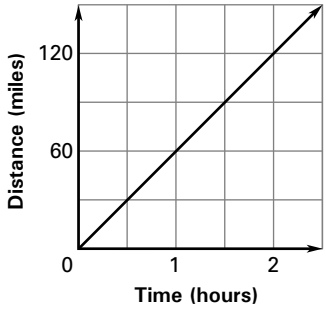
J 7

GO ON

Name _____ Date _____

Pre Test (continued)

23 This graph shows a linear relationship shared by time and distance.



Find the distance at 4 hours 20 minutes.

A 240 miles

B 255 miles

C 260 miles

D 270 miles

24 Which statement about linear and nonlinear functions is *always* true?

F The graph of a nonlinear function is a straight line.

G A line parallel to the *y*-axis is the graph of a linear function.

H The graph of a nonlinear function is a horizontal line.

J All solutions of a linear function lie on the graph of the line which passes through any two solutions of the equation.

25 Simplify $(9.4 \times 10^3)(2.367 \times 10^{-10})$.

A -2.22498×10^{-7}

B -2.22498×10^{-6}

C 2.22498×10^{-7}

D 2.22498×10^{-6}

26 The ruby-throated hummingbird is about 4 inches long and is known for its annual nonstop flight of about 500 miles across the Gulf of Mexico. Some hummingbirds weigh approximately 3 grams and can flap their wings at a rate of 55 times per second. About how many of the ruby-throated hummingbird's body lengths are equal to the distance of its migration?

F 660,000

G 7,920,000

H 10,560,000

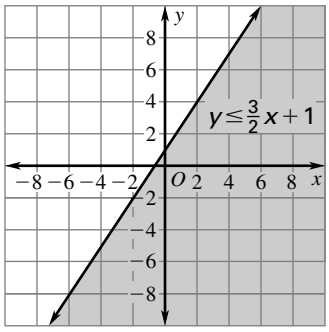
J 31,680,000

GO ON

Name _____ Date _____

Pre Test (continued)

27 The graph below shows the solution set of an inequality.



Which inequality does the graph represent?

A $y \leq \frac{3}{2}x + 1$

B $y < \frac{3}{2}x + 1$

C $y \geq \frac{3}{2}x + 1$

D $y > \frac{3}{2}x + 1$

28 A mass of 5 kilograms is approximately equal to what number of pounds?

F about 2.3 lb

G about 5 lb

H about 11 lb

J about 25 lb

29 Which number is irrational?

A $\frac{\pi + 3}{3 + \pi}$

B $\sqrt{4}$

C $\sqrt{6}$

D $\frac{4\pi}{3\pi}$

30 Given: $\begin{cases} g(x) = \frac{x + 4}{2} \\ h(x) = \frac{2x + 7}{6} \end{cases}$

If $f(x) = g(x)$, what is the value of x?

F -5

G $-\frac{17}{4}$

H $-\frac{10}{3}$

J -3

GO ON

Name _____ Date _____

Pre Test (continued)

31 Which of the following rational numbers is closest to the irrational number $\sqrt{3}$?

A $\frac{17}{10}$

B $\frac{7}{4}$

C $\frac{9}{5}$

D $\frac{15}{8}$

32 In the coordinate plane, a line segment is bisected by a perpendicular line. The endpoints of the line segment are at $(-2, 3)$ and $(3, 3)$. What ordered pair represents the point of intersection?

F $(0, 3)$

G $\left(2\frac{1}{2}, 3\right)$

H $\left(3, \frac{1}{2}\right)$

J $\left(\frac{1}{2}, 3\right)$

33 A company sells packages of yarn and patterns to make knitted sweaters. Which package is the best buy?

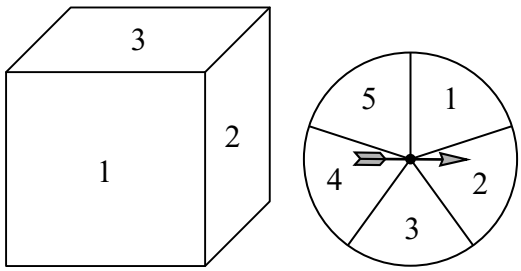
A \$36.90 for 9 sweaters

B \$30.40 for 8 sweaters

C \$29.75 for 7 sweaters

D \$27.00 for 6 sweaters

34 The number cube has faces labeled 1 through 6. The spinner has 5 equal sections labeled 1 through 5.



What is the probability that the number cube will land on an even number and the spinner will land on 5?

F $\frac{1}{10}$

G $\frac{1}{15}$

H $\frac{7}{10}$

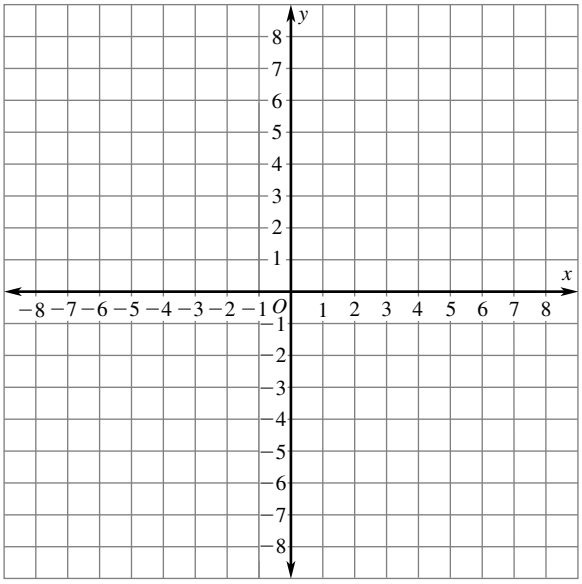
J $\frac{4}{11}$

GO ON

Name _____ Date _____

Pre Test (continued)

35 A right triangle in the coordinate plane has vertices at $(-3, 1)$, $(-3, -3)$, and $(4, -3)$. To the nearest tenth, what is the length of the hypotenuse?



A 8 units

B 8.1 units

C 8.2 units

D 65 units

36 Which of the following numbers cannot be an irrational number?

F $\sqrt{63}$

G $\frac{158}{173}$

H 3.121316...

J $\frac{3}{\pi}$

37 Simplify $\frac{(0.8 \times 10^5)}{(0.05 \times 10^9)}$.

A 1.6×10^{-13}

B 1.6×10^{-4}

C 1.6×10^{-3}

D 1.6×10^5

GO ON

Name _____ Date _____

Pre Test (continued)

38 Jamal and LaTasha are college students. Together, they have 172 course credits. Three times LaTasha's credits is 156 credits more than twice the number of credits Jamal has. How many credits does Jamal have?

F 72

G 86

H 100

J 328

39 Suppose you are traveling at a rate of 50 miles per hour. After 2.5 hours, how far have you taveled?

A 20 miles

B 40 miles

C 100 miles

D 125 miles

40 Sarah bought some ribbon for a sewing project. The table shows the relationship between the amount of ribbon purchased (r) and the cost (c).

Ribbon (r) (in feet)	Cost (c) (in dollars)
1	3
2	6
3	9
4	12

Which equation represents the relationship shown in the table?

F $c = 3r$

G $c - 8 = r$

H $r = 3c$

J $r + 2 = c$

41 What is the difference, in number of people, between the largest and the smallest countries listed in the table?

Country	2006 Population
Chad	9.8×10^6
Libya	5.9×10^6
Mali	1.17×10^7
Mauritania	3.2×10^6
Nigeria	1.25×10^7

A 5.8×10^6

B 6.6×10^6

C 8.5×10^6

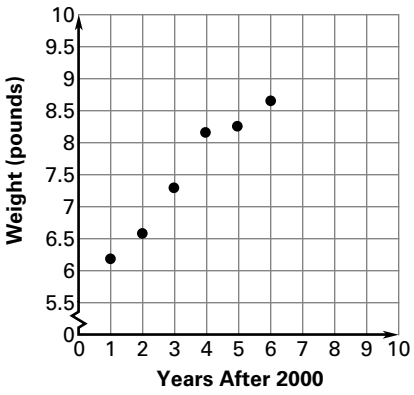
D 9.3×10^6

GO ON

Name _____ Date _____

Pre Test (continued)

42 The scatterplot below shows the weight of the largest bass caught in a lake each year for a number of years.



What do you predict the weight of the largest bass will be in 2007?

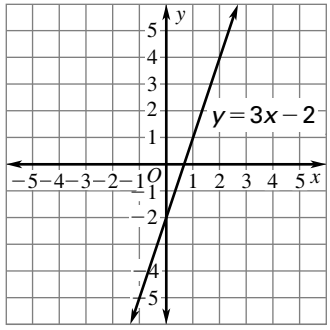
F 8 lbs

G 8.5 lbs

H 9 lbs

J 10 lbs

43 The graph of the linear function $f(x) = 3x - 2$ is shown below.



What is the y-intercept of the function?

A -2

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

C $\frac{2}{3}$

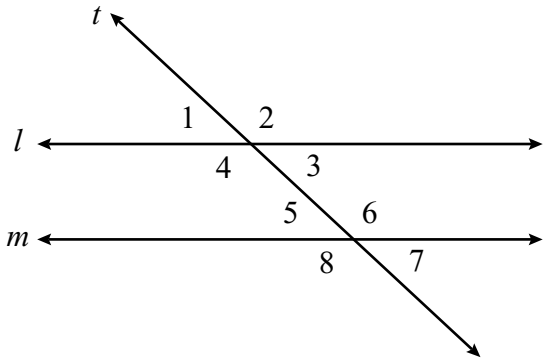
D 2

GO ON

Name _____ Date _____

Pre Test (continued)

44 The drawing shows parallel lines l and m intersected by transversal t.



The measure of $\angle 8$ is 135°. What is the measure of $\angle 3$?

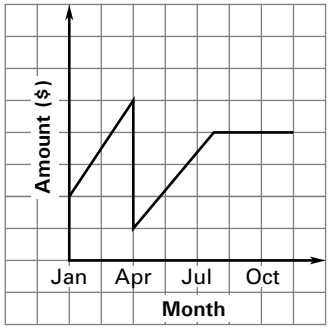
F 45°

G 55°

H 60°

J 135°

45 Sara has a savings account. The graph below shows the month and the amount of money in Sara's account.



Based on the graph, in which month did Sara most likely use money from her savings account to make a large purchase?

A January

B April

C July

D October

46 These equations represent two lines.

$$y = x \qquad y = -x$$

At what point in the coordinate plane will the graphs of the equations intersect?

F $(-1, -1)$

G $(0, 0)$

H $(0, -1)$

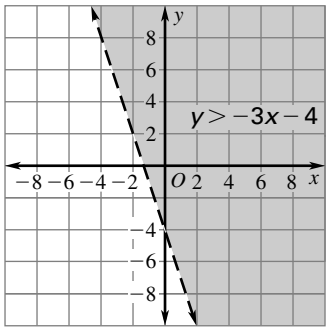
J $(-1, 0)$

GO ON

Name _____ Date _____

Pre Test (continued)

47 The graph below shows the solution set of an inequality.



Which inequality does the graph represent?

A $y < -3x - 4$

B $y > -3x - 4$

C $y < -4x - 3$

D $y > -4x - 3$

48 The capacity of a container is 1,500 milliliters. What is the capacity of the container in liters?

F 0.15

G 1.5

H 15

J 1,500,000

GO ON

Name _____ Date _____

Pre Test (continued)

49 The world's largest country, Russia, has an area of 1.7075×10^7 square kilometers. The world's smallest country, Vatican City, has an area of 4.4×10^{-1} square kilometers. How many times bigger is Russia than Vatican City?

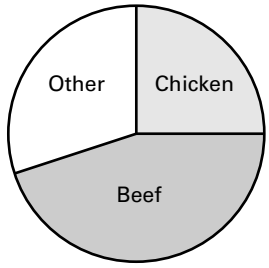
A 1.45×10^4

B 3.92×10^5

C 1.71×10^6

D 3.88×10^7

50 The graph below displays information about meat consumption in Texas.



Which statement explains why the following claim may be inaccurate? According to the information in the graph, chicken is the second most popular meat.

F The exact amount of chicken that is consumed is not given.

G A meat included in the "other" category may be more popular than chicken.

H Beef and chicken are equally popular.

J There are no units of measurement.

GO ON

Name _____ Date _____

Pre Test (continued)

51 Look at the function table.

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

Which of the following equations represents the relationship between x and y shown in the table?

A $y = 3x$

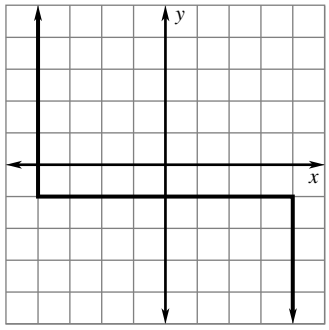
B $y = -3x$

C $y = 3x - 3$

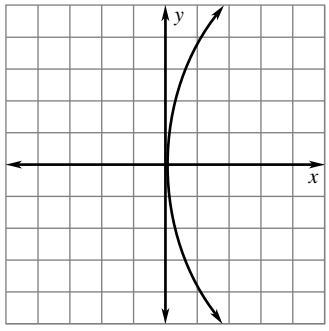
D $y = x + 3$

52 Which graph represents a linear function?

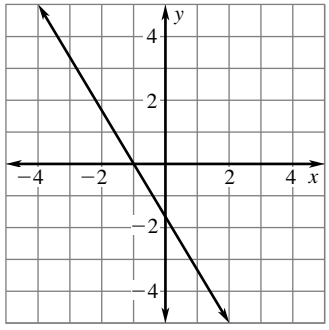
F



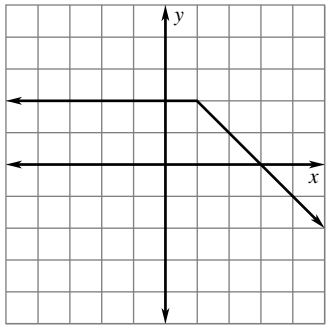
G



H



J



GO ON

Name _____ Date _____

Pre Test (continued)

53 Ms. Loggia wrote four irrational numbers on the board and asked Julius to choose the number closest to 5. Which irrational number should Julius choose?

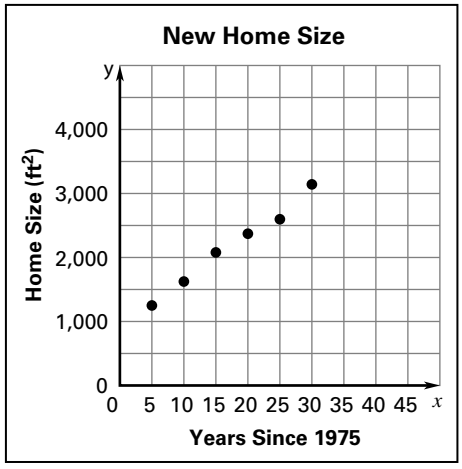
A $\sqrt{14}$

B $\sqrt{20}$

C $\sqrt{27}$

D $\sqrt{35}$

54 The scatterplot below shows the average size of a new home in a certain county, where x represents years after 1975.



Based on the information in the scatterplot, what do you predict the average size of a new home in this county will be in 2020?

F 4,200 ft^2

G 3,700 ft^2

H 3,500 ft^2

J 3,200 ft^2

55 What is the solution to this system of linear equations?

$$2x + y = 1$$
$$x - y = -13$$

A $(-12, 1)$

B $(-4, 9)$

C $(-2, 5)$

D $(4, -7)$

56 Which number is rational?

F $-\frac{\pi}{2}$

G $\sqrt{49}$

H $\sqrt{50}$

J 16π

57 A card is randomly selected from the cards shown below.

1	2	3	4	5	6	7	8

What is the probability that the selected card will be a 4 or an odd number?

A $\frac{1}{4}$

B $\frac{3}{8}$

C $\frac{1}{2}$

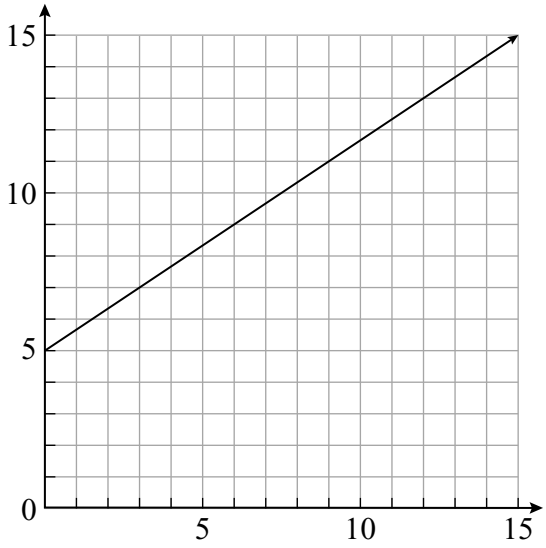
D $\frac{5}{8}$

GO ON

Name _____ Date _____

Pre Test (continued)

58 Which table of ordered pairs below is shown on this graph?



F

x	*y*
0	0
1	3
2	6
3	9

G

x	*y*
0	0
3	3
6	6
9	9

H

x	*y*
0	0
2	3
4	6
6	9

J

x	*y*
0	5
3	7
6	9
9	11

59 One mile is equal to what number of yards?

A 15,840

B 440

C 1,760

D $146\frac{2}{3}$

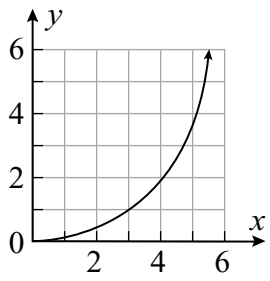
GO ON

Name _____ Date _____

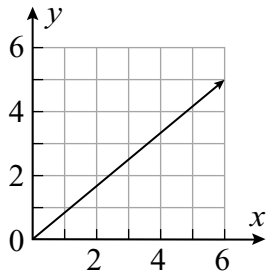
Pre Test (continued)

60 Which graph (or graphs) represents a linear function?

1



2



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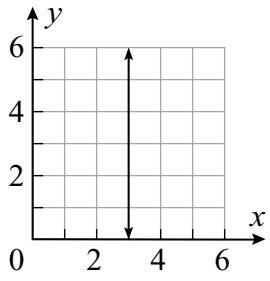
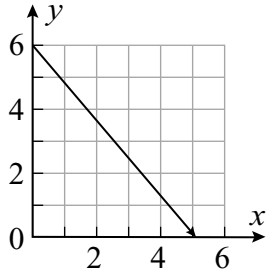


4



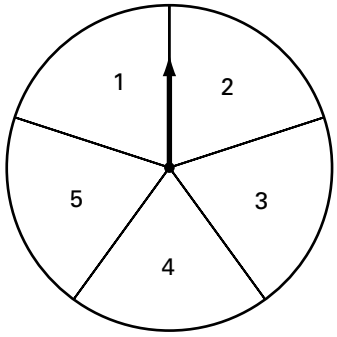
F Graph 1

G Graphs 1 and 3

H Graphs 2 and 4

J Graphs 2, 3, and 4

61 Krysia has a spinner like the one shown below.



Krysia would like to increase the chances of the following events:

- Spinning an even number.
- Spinning a number less than 4.
- Spinning the square root of 4.

Krysia decides to remove the 5 from the spinner. Which statement best supports her reasoning?

A Spinning a 5 is not a favorable outcome.

B Spinning a 5 has the greatest probability.

C The number 5 is the greatest number.

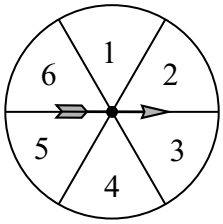
D The number 5 takes up the most space on the spinner.

GO ON

Name _____ Date _____

Pre Test (continued)

62 This spinner is divided into 6 equal sections. The sections are numbered 1 through 6. If the arrow is spun once, what is the probability that it will stop on a section labeled with the 5 or a section labeled with an even number?



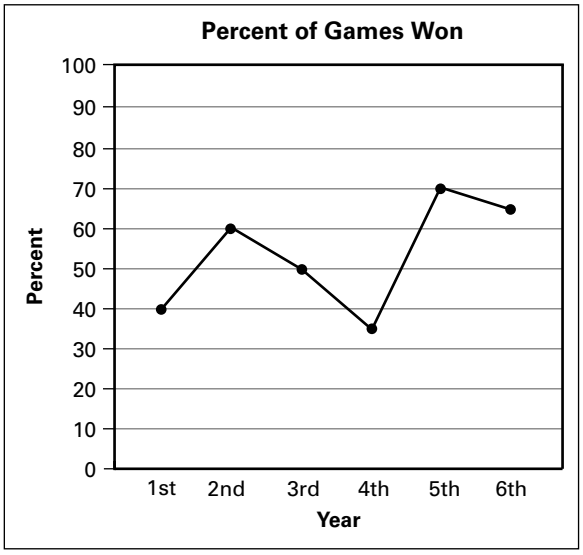
F $\frac{1}{3}$

G $\frac{1}{12}$

H $\frac{2}{3}$

J 1

63 The graph shows the percent of hockey games a school won during a 6-year period.



A line graph is not an appropriate way to display the data. What other type of display is not appropriate?

A a circle graph

B a tally chart

C a stem-and-leaf plot

D a bar graph

64 Lee Ann is going on a trip. She packs a blue shirt, a white shirt, and a green shirt. She also packs one blue pair of pants and one tan pair of pants. She drew this tree diagram to show the possible outfits she can wear.

shirt	pants	outcomes
blue	blue	blue, blue
	tan	blue, tan
white	blue	white, blue
	tan	white, tan
green	blue	green, blue
	tan	green, tan

What is the probability that she will wear something blue?

F $\frac{1}{6}$

G $\frac{1}{2}$

H $\frac{2}{3}$

J $\frac{4}{3}$

GO ON

Name _____ Date _____

SPI 0806.1.1

Solve problems involving rate/time/distance (i.e., d = rt).

1 Dr. Orlov ran a 14-kilometer race last year, in a time of 55 minutes. This year Dr. Orlov would like to run the same race in 0.8 hours. How many kilometers per hour should Dr. Orlov run to complete the race in 0.8 hours? [$D = rt$]

A 13.5 km/h

B 15 km/h

C 17.5 km/h

D 19 km/h

2 A runner covers 3 miles in 22 minutes. How far, running at the same rate, can the runner run in half an hour?

F 3.5 miles

G 3.7 miles

H 3.9 miles

J 4.1 miles

3 The bullet train running between the Japanese cities of Hiroshima and Kokura covers 120 miles in 44 minutes. What is the average speed of the train?

A 1.64 miles per minute

B 2.73 miles per minute

C 3.67 miles per minute

D 5.28 miles per minute

GO ON

Name _____ Date _____

SPI 0806.1.1 (continued)

4 The average speed of an arrow shot from a certain bow is 250 feet per second. At this rate, how much time would the arrow take to fly 800 feet?

F 0.3125 seconds

G 3.2 seconds

H 5.5 seconds

J 10.5 seconds

5 In a 1,500-meter race between two speed skaters, one skater averages 45 kilometer per hour while the other skater averages 52 kilometers per hour. What is the difference between the two skaters' finish times?

A 0.27 minutes

B 1.73 minutes

C 2.00 minutes

D 3.73 minutes

6 Rachel's horse gallops at an average speed of 27 miles per hour. What distance could the horse travel while moving at this rate for $\frac{1}{4}$ of an hour?

F $1\frac{4}{5}$ miles

G $6\frac{3}{4}$ miles

H 108 miles

J 405 miles

GO ON

Name _____ Date _____

SPI 0806.1.1 (continued)

7 Parvati skis downhill at an average speed of 840 meters per minute. About how many minutes will she take at this rate to ski 3,000 meters?

A 2.52 minutes

B 3.57 minutes

C 25.2 minutes

D 35.7 minutes

8 Andrew rides his bicycle 3 miles to school. His average speed is 12 miles per hour. On the way home he follows the same route, but his average speed is only 10 miles per hour. How much longer does Andrew take to ride home?

F 0.25 minutes

G 0.30 minutes

H 2 minutes

J 3 minutes

9 A cheetah runs 13.5 kilometers in 6.75 minutes. What is the cheetah's average rate of speed?

A 0.5 kilometers per minute

B 1.0 kilometers per minute

C 1.5 kilometers per minute

D 2.0 kilometers per minute

GO ON

Name _____ Date _____

SPI 0806.1.1 (continued)

10 Competitors in an engineering contest try to build a machine that can climb a 900-meter cable in less than 3 minutes. Which could be the average speed of the winning machine?

F 280 meters per minute

G 290 meters per minute

H 300 meters per minute

J 310 meters per minute

11 An ostrich runs 3.75 miles in 5 minutes. What is the average speed of the ostrich?

A 0.625 miles per minute

B 0.75 miles per minute

C 18.75 miles per minute

D 22.5 miles per minute

12 The table shows the time and distance four members of a school track team run. Which runner has the fastest average speed?

Name	Time (min)	Distance (miles)
Kai	60	5
Joy	85	6
Mya	75	7
Sami	90	8

F Kai

G Joy

H Mya

J Sami

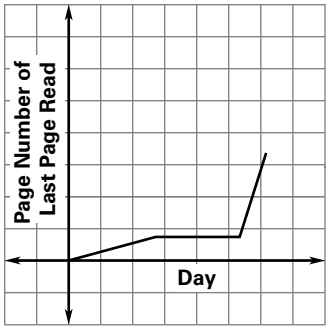
GO ON

Name _____ Date _____

SPI 0806.1.2

Interpret a qualitative graph representing a contextual situation.

1 Sanjay read a novel for English class. The graph below shows the days and the page number of the last page he read each day.



Based on the graph, which best describes how Sanjay read the novel?

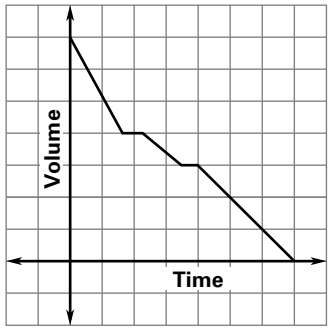
A He read at least one page of the novel each day.

B He read about the same number of pages each day.

C He read most of the novel during his first few days of reading.

D He read most of the novel during his last few days of reading.

2 After working out, Martin drinks a bottle of water. The graph shows the volume of water in the bottle and the time since the end of Martin's workout.



Based on the graph, which is most likely the number of times Martin stopped to take a breath while drinking his water?

F 0

G 2

H 3

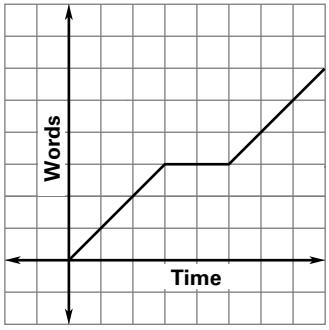
J 5

GO ON

Name _____ Date _____

SPI 0806.1.2 (continued)

3 Dillon types a report for school. The graph shows the time since Dillon began typing and the total number of words he has typed.



Based on the graph, at what point did Dillon most likely take a break for lunch?

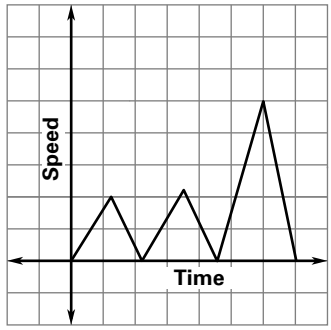
A Just after he started typing

B After he had typed about half the report

C Just before he finished typing the report

D After he had finished typing the report

4 Eva drives to a friend's house after school. The graph shows the changes in the speed of Eva's car as she drives.



Based on the graph, how many times did Eva have to stop for a red light during her drive?

F 2

G 3

H 4

J 5

GO ON

Name _____ Date _____

SPI 0806.1.3

Calculate rates involving cost per unit to determine the best buy.

1 A 3-pack of golf balls costs $3.65. A 12-pack costs $17.50. To the nearest cent, how much more per ball will it cost if you purchase the 3-pack instead of the 12-pack?

A $13.85

B $2.68

C $2.43

D $.24

2 The Close 'N Smooth Company sells disposable razors in packages of 11 for $9.68. Which company sells disposable razors for the least unit price?

F On The Edge
9 razors for $7.92

G Stubl B Gone
12 razors for $10.25

H Slice of Life, Inc.
8 razors for $7.12

J Brisk Wisk
5 razors for $4.52

3 A restaurant offers four sizes of drinks.

	Size (oz)	Price ($)
Kids	8	$1.15
Small	16	$2.05
Medium	24	$3.00
Large	32	$4.10

Which drink is the best buy?

A Kids

B Small

C Medium

D Large

GO ON

Name _____ Date _____

SPI 0806.1.3 (continued)

4 Gerrick needs to buy laundry detergent. Which is the best buy?

F SudsyStuff
$1.08 for 72 ounces

G Rain Clean
$1.10 for 58 ounces

H Wash Away
$1.17 for 65 ounces

J Lemon Luxury
$1.89 for 90 ounces

5 Four people buy balloons for a school party. Which person pays the least unit price?

A Alejandro buys 26 balloons for $2.55

B Gina buys 28 balloons for $2.45

C Liliana buys 25 balloons for $2.50

D Walker buys 24 balloons for $2.35

6 Insect Friends Trading Cards come in four different packages. Which package sells for the least price per card?

F Booster Pack
$1.75 for 5 cards

G Special Edition Pack
$2.52 for 7 cards

H Starter Pack
$9.99 for 30 cards

J Explorer Pack
$4.65 for 15 cards

GO ON

Name _____ Date _____

SPI 0806.2.1

Order and compare rational and irrational numbers and locate on the number line.

1 Which fraction is between $\sqrt{0.56}$ and $\sqrt{0.65}$?

A $\frac{5}{8}$

B $\frac{9}{10}$

C $\frac{2}{3}$

D $\frac{7}{9}$

2 Ms. Renard wrote four irrational numbers on the board and asked Omar to choose the number closest to 8. Which irrational number should Omar choose?

F $\sqrt{54}$

G $\sqrt{65}$

H $\sqrt{72}$

J $\sqrt{80}$

3 Which fraction is between $\sqrt{33}$ and $\sqrt{34}$?

A $5\frac{3}{4}$

B $5\frac{3}{5}$

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

D $5\frac{11}{20}$

GO ON

Name _____ Date _____

SPI 0806.2.1 (continued)

4 Which of the following sets of numbers is in order from least to greatest?

F $1.75, \frac{8}{5}, 1\frac{7}{10}, \sqrt{5}$

G $\frac{8}{5}, \sqrt{5}, 1.75, 1\frac{7}{10}$

H $\frac{8}{5}, 1\frac{7}{10}, 1.75, \sqrt{5}$

J $\sqrt{5}, 1.75, 1\frac{7}{10}, \frac{8}{5}$

5 Between which two integers is the square root of 150?

A between 10 and 11

B between 11 and 12

C between 12 and 13

D between 13 and 14

6 Which fraction is between $\sqrt{76}$ and $\sqrt{78}$?

F $8\frac{7}{9}$

G $8\frac{10}{11}$

H $8\frac{7}{12}$

J $8\frac{7}{8}$

GO ON

Name _____ Date _____

SPI 0806.2.1 (continued)

7 Which of these lists of numbers is in order from greatest to least?

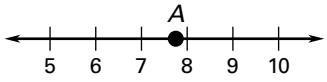
A $\sqrt{2}$, 1.3, $-\frac{7}{5}$, -2

B -2, $-\frac{7}{5}$, $\sqrt{2}$, 1.3

C -2, $-\frac{7}{5}$, 1.3, $\sqrt{2}$

D $\sqrt{2}$, 1.3, -2, $-\frac{7}{5}$

8 Which is closest to the value of point A?



F $\sqrt{50}$

G $\sqrt{60}$

H $\sqrt{70}$

J $\sqrt{80}$

9 Which fraction is between $-\sqrt{42}$ and $-\sqrt{43}$?

A $6\frac{1}{2}$

B $6\frac{13}{20}$

C $-6\frac{12}{25}$

D $-6\frac{13}{25}$

GO ON

Name _____ Date _____

SPI 0806.2.1 (continued)

10 Which square root is between $3\frac{2}{3}$ and $3\frac{6}{7}$?

F $\sqrt{12}$

G $\sqrt{13}$

H $\sqrt{14}$

J $\sqrt{15}$

11 Between which two integers is the square root of 216?

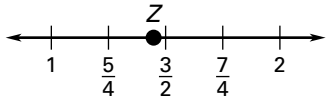
A 14 and 15

B 15 and 16

C 16 and 17

D 17 and 18

12 Which is closest to the value of point *Z*?



F $\sqrt{1}$

G $\sqrt{2}$

H $\sqrt{3}$

J $\sqrt{4}$

GO ON

Name _____ Date _____

SPI 0806.2.2

Identify numbers and square roots as rational or irrational.

1 Which is an irrational number?

A $\frac{17}{9}$

B $-6.\overline{6}$

C $\sqrt{99}$

D $\sqrt{400}$

2 Which is a rational number?

F $\sqrt{40}$

G $\sqrt{400}$

H $\sqrt{50}$

J $\sqrt{500}$

GO ON

Name _____ Date _____

SPI 0806.2.2 (continued)

3 Which is an irrational number?

A $\frac{1}{9}$

B $\frac{3}{4}$

C $\sqrt{121}$

D $\sqrt{136}$

4 Which is a rational number?

F $\frac{4 + \pi}{\pi + 4}$

G $\frac{4\pi^2}{4\pi}$

H 4π

J $4\pi^2$

GO ON

Name _____ Date _____

SPI 0806.2.3

Use scientific notation to compute products and quotients.

1 Simplify $(8.2 \times 10^{-27})(4.5 \times 10^{11})$.

A -3.69×10^{-15}

B -3.69×10^{15}

C 3.69×10^{-15}

D 3.69×10^{15}

2 Simplify $(9.5 \times 10^{6})(7.02 \times 10^{-3})$.

F -6.669×10^{-21}

G -6.669×10^{4}

H 6.669×10^{-21}

J 6.669×10^{4}

3 Simplify $\frac{2 \times 10^{-3}}{9.8 \times 10^{-6}}$.

A 2.04×10^{-9}

B 2.04×10^{-2}

C 2.04×10^{2}

D 2.04×10^{18}

GO ON

Name _____ Date _____

SPI 0806.2.3 (continued)

4 Simplify $\frac{6.07 \times 10^{-2}}{3.035 \times 10^{3}}$.

F 0.00002

G 0.2

H 2

J 200,000

5 Simplify $(1.2 \times 10^{9})\ (1.2 \times 10^{-7})$.

A 0.0144

B 144

C 1,440

D 14,400

6 Simplify $(5.38 \times 10^{-4})\ (5.83 \times 10^{4})$.

F 3.13654

G 31.3654

H 313.654

J 3136.54

Name _____ Date _____

SPI 0806.2.4

Solve real-world problems requiring scientific notation.

1 The speed of light is about 2.99×10^8 meters per second. The average distance from the Moon to Earth is about 3.84×10^8 meters. About how many seconds does light take to travel from the Moon to Earth?

A 0.128 seconds

B 1.28 seconds

C 12.8 seconds

D 128 seconds

2 The planet Mercury is an average of about 3.598×10^7 miles from the Sun. Neptune's average distance from the Sun is about 2.795×10^9 miles. About how many times farther from the Sun is Neptune?

F 0.777

G 7.77

H 77.7

J 777

GO ON

Name _____ Date _____

SPI 0806.2.4 (continued)

3 The mass of the Earth is about 5.9×10^{24} kilograms. The mass of the Sun is about 3.3×10^{5} times the mass of Earth. Which is the best estimate of the mass of the Sun?

A 1.9×10^{19}

B 1.9×10^{29}

C 1.9×10^{30}

D 1.9×10^{31}

4 A light-year is the distance light can travel in one year, about 5.9×10^{12} miles. The star Cygni is about 11.4 light-years from Earth. What is the distance from Earth to Cygni in miles?

F 5.2×10^{11} miles

G 6.7×10^{11} miles

H 5.2×10^{13} miles

J 6.7×10^{13} miles

GO ON

Name _____ Date _____

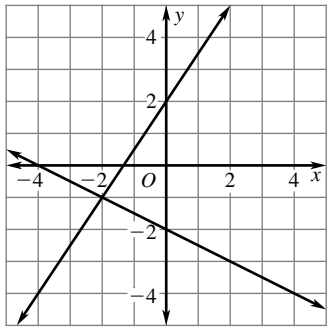
SPI 0806.3.1

Find solutions to systems of two linear equations in two variables.

1 The graph shows the system of equations below.

$y = -\frac{1}{2}x - 2$

$y = \frac{3}{2}x + 2$



What is the solution of the system of equations?

A $x = -4$

B $(-2, -1)$

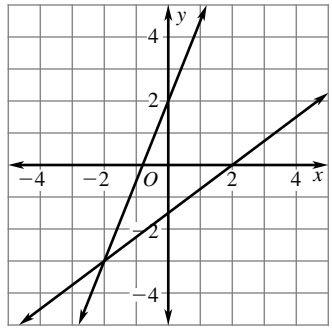
C $-2 \leq y \leq 2$

D $(2, -2)$

2 The graph shows the system of equations below.

$y = \frac{5}{2}x + 2$

$y = \frac{3}{4}x - \frac{3}{2}$



What is the solution of the system of equations?

F $x = -2$

G $(-2, -3)$

H 2

J $(-3, -2)$

GO ON

Name _____ Date _____

SPI 0806.3.1 (continued)

3 Solve the following system.

$y = \frac{2}{3}x - 1$

$y = \frac{5}{3}x - 4$

A $\left(-\frac{1}{3}, 1\right)$

B $\left(1, -\frac{1}{3}\right)$

C $(1, 3)$

D $(3, 1)$

4 Solve the following system.

$y = x + 2$

$y = -\frac{1}{2}x - 1$

F $(-2, 0)$

G $(0, -2)$

H $(0, 2)$

J $(2, 4)$

5 What is the solution of the system of linear equations below?

$y = x - 2$

$y = -x - 4$

A $(-1, 3)$

B $(-3, -1)$

C $(-1, -3)$

D $(3, -1)$

GO ON

Name _____ Date _____

SPI 0806.3.1 (continued)

6 What is the solution of the system of linear equations below?

$y = 2x + 6$

$y = -\frac{1}{2}x + 1$

F $(-2, 2)$

G $(-3, 0)$

H $(-1, 4)$

J $(2, 10)$

7 What is the solution of the system of linear equations below?

$2x + y = -4$

$-3x - 2y = 3$

A $(-6, 1)$

B $(-5, 6)$

C $(1, -6)$

D $(6, -5)$

8 What is the solution of the system of linear equations below?

$y + 3x = -10$

$-2y - 3x = 8$

F $(-10, 8)$

G $(-4, 2)$

H $(-1, -7)$

J $(0, -10)$

9 What is the solution of the system of linear equations below?

$x + y = 26$

$-x + 2y = 16$

A $(-8, 4)$

B $(-1, 27)$

C $(12, 14)$

D $(13, 13)$

GO ON

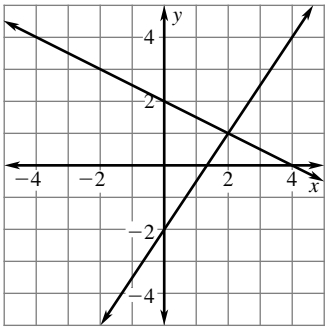
Name _____ Date _____

SPI 0806.3.1 (continued)

10 The graph shows the system of equations below.

$x + 2y = 4$

$-3x + 2y = -4$



What is the solution of the system of equations?

F (1, 2)

G $x = 4$

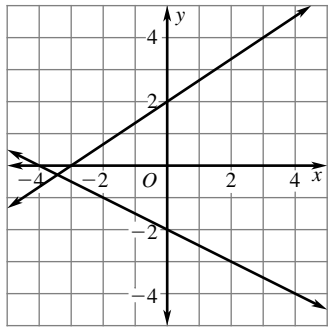
H (2, 1)

J $-2 \leq y \leq 2$

11 The graph shows the system of equations below.

$-2x + 3y = 6$

$x + 2y = -4$



What is the solution of the system of equations?

A $\left(\frac{24}{7}, \frac{2}{7}\right)$

B $\left(-\frac{24}{7}, \frac{2}{7}\right)$

C $\left(\frac{24}{7}, -\frac{2}{7}\right)$

D $\left(-\frac{24}{7}, -\frac{2}{7}\right)$

GO ON

Name _____ Date _____

SPI 0806.3.2

Solve the linear equation $f(x) = g(x)$.

1 Given: $\begin{cases} f(x) = 2x + 5 \\ g(x) = \frac{5x}{2} \end{cases}$

If $f(x) = g(x)$, what is the value of x?

A 10

B 15

C 25

D 50

2 Travis and Diego each drive the same distance d on a road trip. Travis drives for 10 hours at an average speed s. Diego drives $9\frac{1}{6}$ hours at an average speed 5 miles per hour greater than Travis's speed. What is Diego's average speed?

F 50 miles per hour

G 55 miles per hour

H 60 miles per hour

J 65 miles per hour

3 The function $f(x) = -2x$ and $g(x) = 5x - 4$. If $f(x) = g(x)$, what is the value of x?

A $-\frac{4}{3}$

B $-\frac{4}{7}$

C $\frac{4}{7}$

D $\frac{4}{3}$

GO ON

Name _____ Date _____

SPI 0806.3.2 (continued)

4 Given: $\begin{cases} f(a) = \frac{a+2}{2} \\ g(a) = -7a \end{cases}$

If $f(a) = g(a)$, what is the value of a?

F $-\frac{1}{10}$

G $-\frac{1}{11}$

H $\frac{1}{11}$

J $\frac{1}{10}$

5 Laila and Harry each spend the same amount of money on paint for a wall mural. Harry pays d dollars per gallon for 12 gallons of paint. Laila pays \$2 less per gallon for 20 gallons of paint. What is the total amount Laila and Harry spend?

A \$8

B \$32

C \$60

D \$120

6 The function $h(x) = 4x - 1$ and $j(x) = \frac{-3x-2}{2}$. If $h(x) = j(x)$, what is the value of x?

F -1

G 0

H $\frac{4}{5}$

J $\frac{5}{4}$

GO ON

Name _____ Date _____

SPI 0806.3.2 (continued)

7 Given: $\begin{cases} f(w) = -2w + 9 \\ g(w) = 4w - 9 \end{cases}$

If $f(w) = g(w)$, what is the value of $w + 5$?

A -2

B 3

C 5

D 8

8 Jenny's car and Teresa's car each get the same gas mileage. Jenny can drive 180 miles on g gallons of gas. Teresa uses 1.5 gallons more than Jenny and drives 213.75 miles. How many gallons of gas did Jenny use?

F 8.0 gallons

G 9.5 gallons

H 17.5 gallons

J 22.5 gallons

9 The function $p(x) = \frac{x + 5}{7}$ and $q(x) = x + 11$. If $p(x) = q(x)$, what is the value of x?

A -17

B -12

C -7

D -1

GO ON

Name _____ Date _____

SPI 0806.3.2 (continued)

10 Given: $\begin{cases} f(b) = 3b + 4 \\ g(b) = \frac{7b}{2} \end{cases}$

If $f(b) = g(b)$, what is the value of b?

F 8

G 9

H 24

J 28

11 Lexi and Lonny can type the same number of words in one minute. Lexi types a report with w words in 95 minutes. Lonny types a report with 150 fewer words in 90 minutes. What is Lonny's typing speed?

A 2700 words per minute

B 150 words per minute

C 30 words per minute

D 5 words per minute

12 The function $f(x) = 10x + 3$ and $g(x) = 3x + 6.5$. If $f(x) = g(x)$, what is the value of $f(x)$?

F 0.5

G 8.0

H 7.5

J 8.5

GO ON

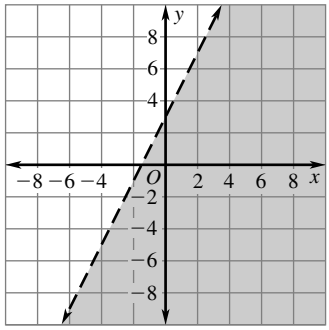
Name _____ Date _____

SPI 0806.3.3

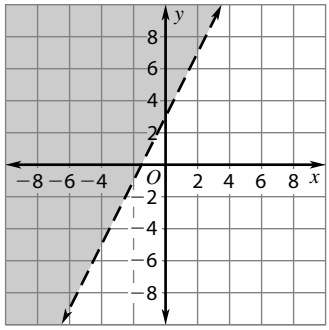
Solve and graph linear inequalities in two variables.

1 Which graph represents the solution set of $y < 2x + 3$?

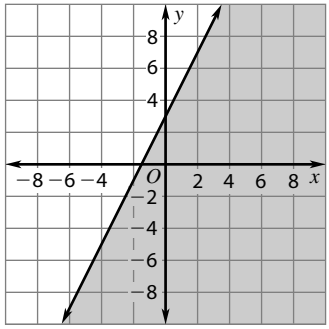
A



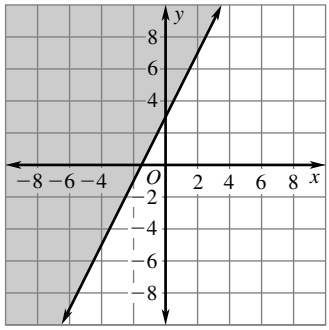
B



C

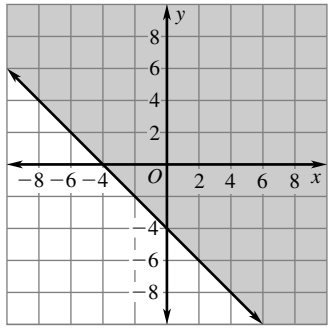


D

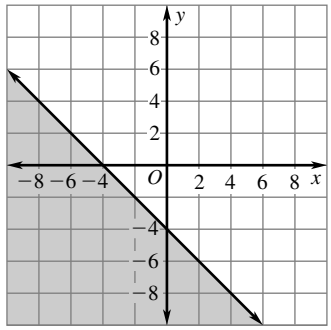


2 Which graph represents the solution set of $y \geq -4x - 1$?

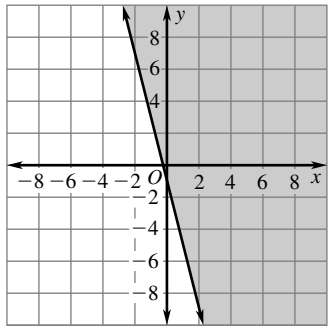
F



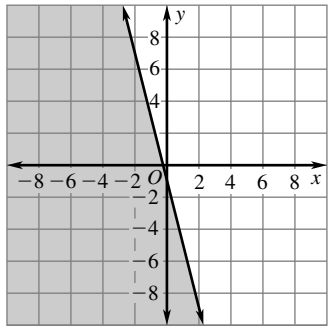
G



H



J

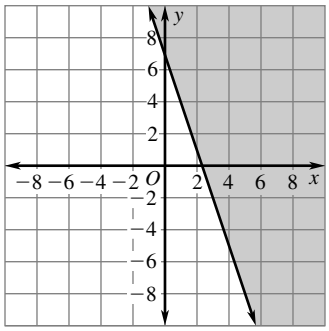


GO ON

Name _____ Date _____

SPI 0806.3.3 (continued)

3 The graph below represents the solution of an inequality.



Which inequality does the graphed solution set satisfy?

A $y \leq -3x + 7$

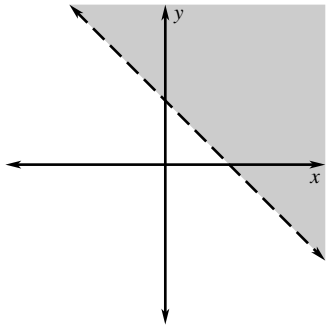
B $y \geq -3x + 7$

C $y < -3x + 7$

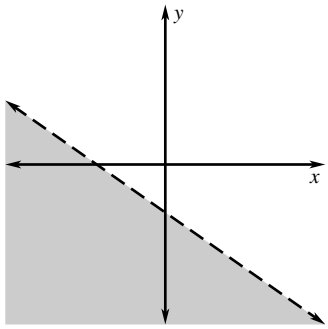
D $y > -3x + 7$

4 Which graph most likely represents the solution set of $y > 9x - 2$?

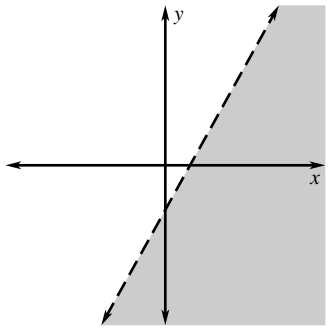
F



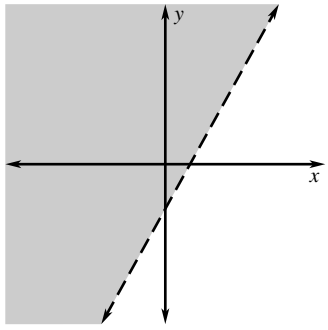
G



H



J



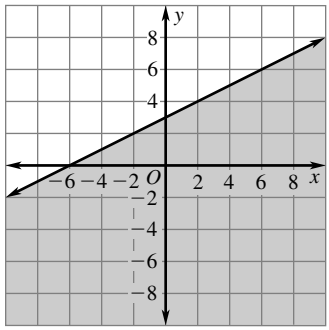
GO ON

Name _____ Date _____

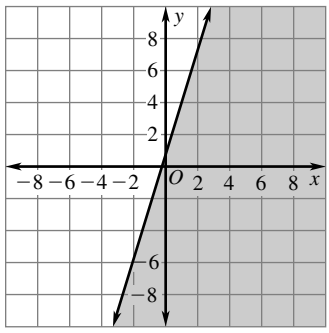
SPI 0806.3.3 (continued)

5 Which graph represents the solution set of $y \leq \frac{1}{2}x + 3$?

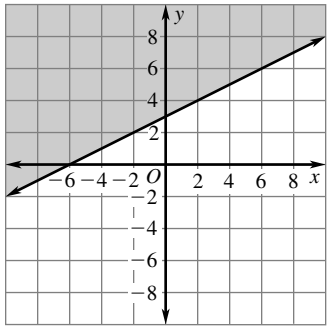
A



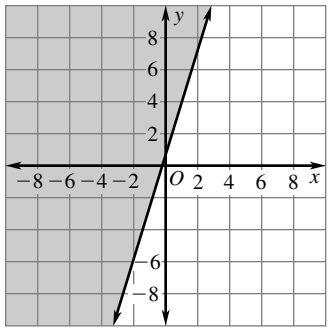
B



C

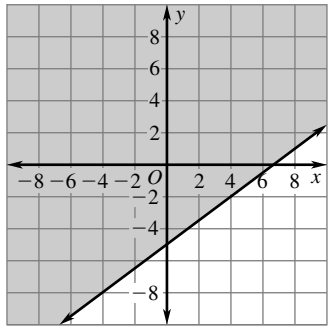


D

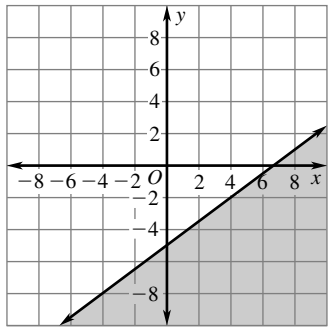


6 Which graph represents the solution set of $y \leq \frac{3}{4}x - 5$?

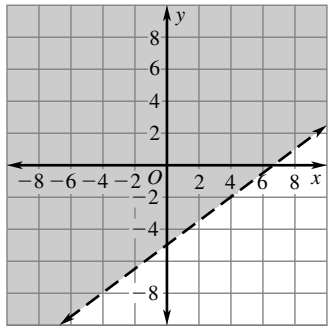
F



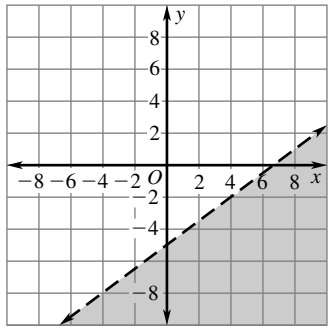
G



H



J

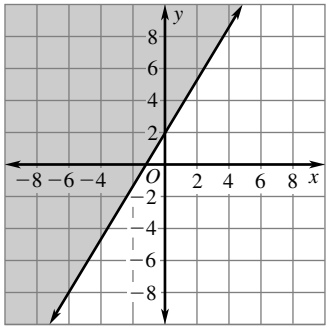


GO ON

Name _____ Date _____

SPI 0806.3.3 (continued)

7 The graph below represents the solution of an inequality.



Which inequality does the graphed solution set satisfy?

A $y \leq \frac{5}{3}x + 2$

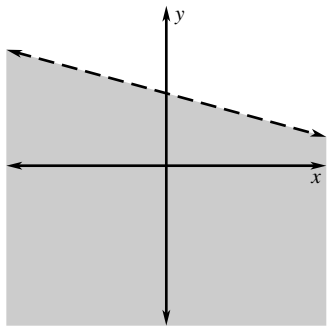
B $y \geq \frac{3}{5}x + 2$

C $y \geq \frac{5}{3}x + 2$

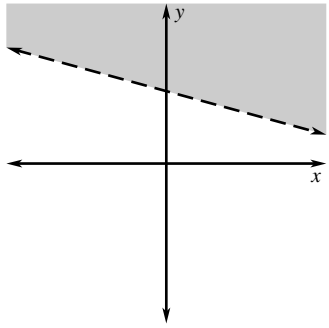
D $y \leq \frac{3}{5}x + 2$

8 Which graph most likely represents the solution set of $y < -\frac{1}{3}x + 2$?

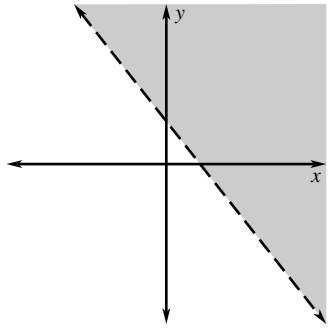
F



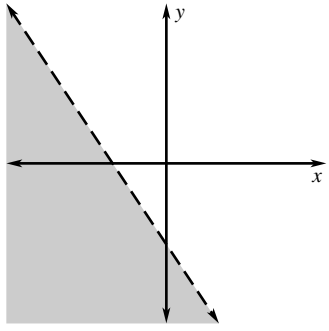
G



H



J



GO ON

Name _____ Date _____

SPI 0806.3.4

Translate between various representations of a linear function.

1 The table shows how much it costs to have a plumber fix a broken pipe.

Times (hours)	0	1	2	3	4
Cost ($)	100	175	250	325	400

Which equation represents the table of values?

A $c = 75h$

B $c = 100 + 75h$

C $c = 175h$

D $c = 100h$

2 The table shows how many feet y a race car travels in x seconds. Which equation describes the data in the table?

Time (sec), x	Distance (ft), y
2	440
3	660
4	880
5	1100

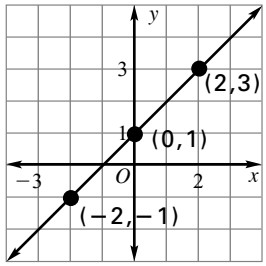
F $x = 220y$

G $y = 220x$

H $x = 440y$

J $y = \frac{220}{x}$

3 Which equation is shown on the graph below?



A $y = x - 1$

B $y = \frac{1}{2}x + 2$

C $y = x + 1$

D $y = 2x - 3$

GO ON

Name _____ Date _____

SPI 0806.3.4 (continued)

4 Which equation describes the four ordered pairs $(-1, -1)$, $(0, 1)$, $(2, 5)$, and $(3, 7)$?

F $y = 2x + 1$

G $y = 2x - 1$

H $y = 4x + 1$

J $y = x + 9$

5 The algebraic form of a linear function is $y = 1.07x$, where x is the price of an item and y is total cost after 7% sales tax is charged. Which of the following identifies the same function?

A

x	*y*
2	2.10
5	5.25
10	10.50

B

x	*y*
0	0
20	21.40
72	77.04

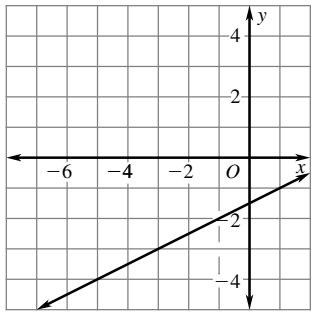
C For every dollar spent before tax, the cost is $107 after tax.

D For every dollar of total cost, the price before tax was $1.07.

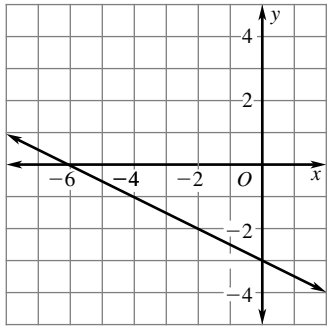
6 Which graph represents the table of values shown below?

x	−5	−3	0	1
y	1	0	−1.5	−2

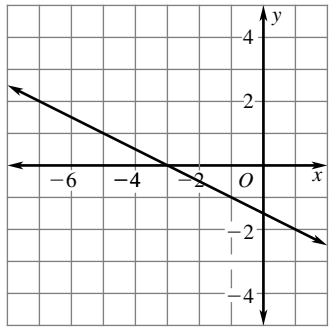
F



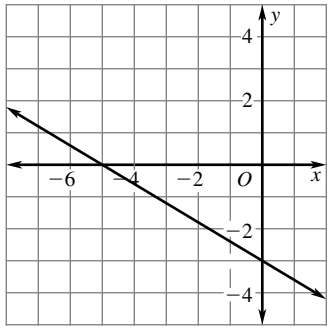
G



H



J



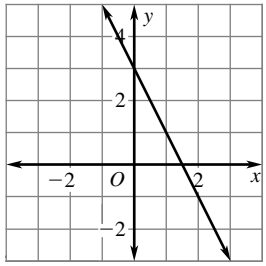
GO ON

Name _____ Date _____

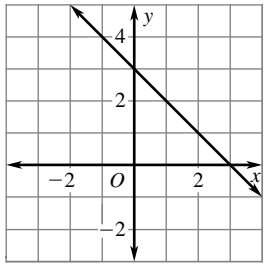
SPI 0806.3.4 (continued)

7 Which graph corresponds to the equation $y = -2x + 3$?

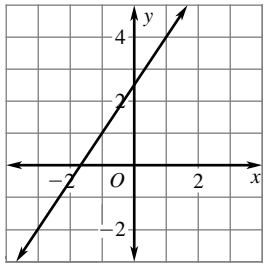
A



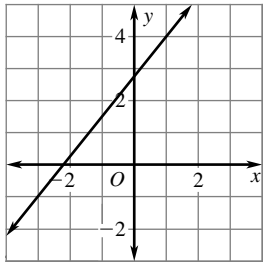
B



C



D



8 The table gives the x- and y-coordinates of several ordered pairs.

x	−1	2	3	5
y	−16	−4	0	8

Which equation describes the relationship of the x- and y-values?

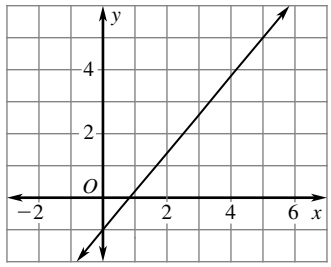
F $y = 3x - 13$

G $y = -x + 3$

H $y = 4x - 12$

J $y = 8x - 8$

9 What is the equation of the line whose graph is shown?



A $y = \frac{5}{6}x + 1$

B $y = \frac{5}{6}x - 1$

C $y = \frac{6}{5}x + 1$

D $y = \frac{6}{5}x - 1$

GO ON

Name _____ Date _____

SPI 0806.3.4 (continued)

10 Audrey and Aaron are selling candy. For every candy bar Audrey sells, Aaron sells two more, as shown in the table. Which equation represents the amount of candy, y, sold by Aaron?

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

F $y = 2x$

G $y = x + 2$

H $y = x - 2$

J $y = \frac{x}{2}$

11 The table below shows the temperature of a pie after being taken out of the freezer. Write a linear equation that describes the relation.

Time (hours)	Temperature (°F)
2	34
8	46
12	54
18	66

A $y = 100 - 33x$

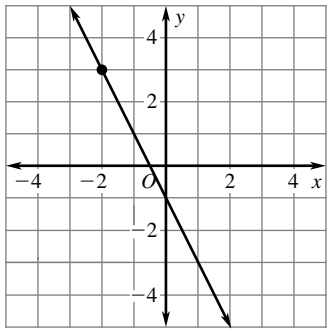
B $y = x + 2$

C $y = 2x + 30$

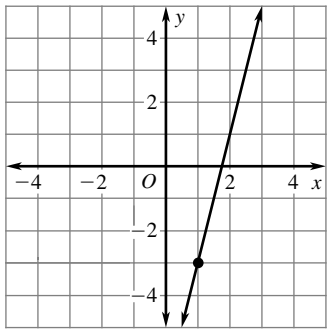
D $y = 10x + 14$

12 Which is the graph of $y = -2x + 4$?

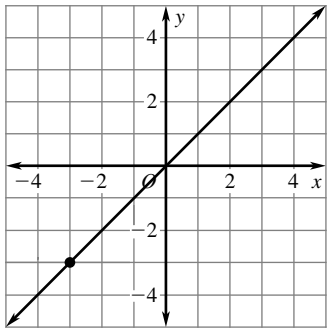
F



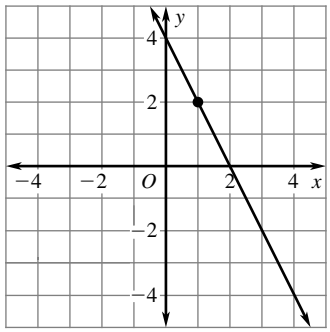
G



H



J



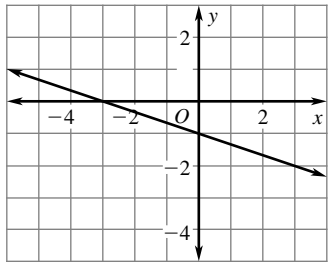
GO ON

Name _____ Date _____

SPI 0806.3.5

Determine the slope of a line from an equation, two given points, a table, or a graph.

1 What is the slope of the line shown in the graph below?



A -3

B $-\frac{1}{3}$

C -1

D $\frac{1}{3}$

2 One way to graph the line $y = -\frac{4}{3}x - 2$ is to plot a point at $(0, -2)$ and then use the slope to plot a second point. Which directions from $(0, -2)$ are a correct way to plot a second point?

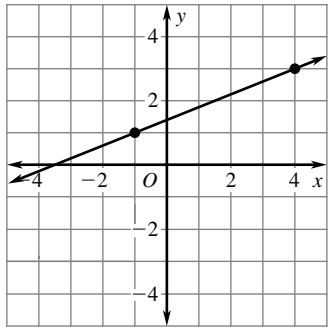
F move down 4 units then left 3 units

G move down 3 units then right 4 units

H move down 4 units then right 3 units

J move down 3 units then left 4 units

3 What is the slope of the line graphed below?



A $\frac{5}{2}$

B $\frac{2}{3}$

C $\frac{3}{2}$

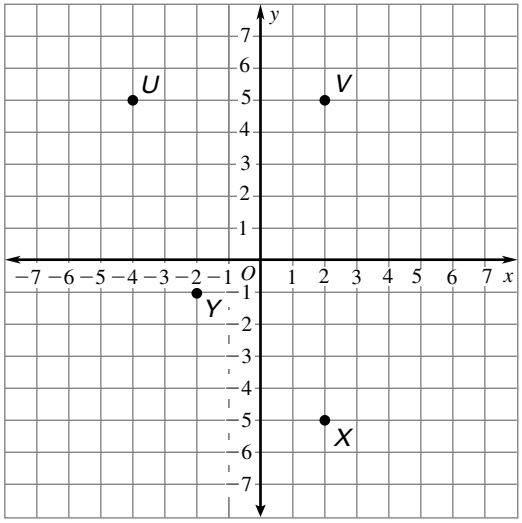
D $\frac{2}{5}$

GO ON

Name _____ Date _____

SPI 0806.3.5 (continued)

Use the graph below for Questions 4–5.



4 Draw a line that passes through points X and Y. What is the slope of the line?

F 2 **H** -1

G 1 **J** -2

5 What is the slope of the line made by connecting points U and V?

A 1

B 0

C -1

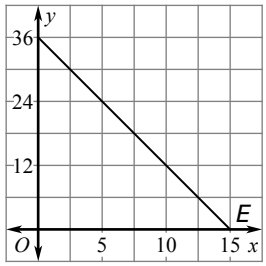
D It cannot be determined.

6 What is the slope of the line that passes through $(0, -5)$ and $(2, -1)$?

F -5 **H** 2

G $\frac{1}{2}$ **J** 4

7 What is the slope of the line shown?



A $-\frac{5}{12}$ **C** $-\frac{12}{5}$

B -1 **D** 1

GO ON

Name _____ Date _____

SPI 0806.3.5 (continued)

8 In the linear equation $y = 4x + 2$, the value 4 represents which of the following?

F The slope of the line

G The y-coordinate of the y-intercept

H The x-coordinate of the y-intercept

J The quadrant in which the line lies

9 What is the slope of the line that passes through $(-3, 1)$ and $(3, 3)$

A -3

B $-\frac{1}{3}$

C $\frac{1}{3}$

D 3

10 What is the slope of the line $y = -x - 4$?

F 1

G 4

H -1

J -4

GO ON

Name _____ Date _____

SPI 0806.3.5 (continued)

11 The table below represents a linear function.

x	*y*
−5	3
0	4
5	5
10	6

What is the slope of the graph of this function?

A -4

B $-\frac{1}{5}$

C $\frac{1}{5}$

D 4

12 What is the slope of this line?

$y = -\frac{7}{8}x + 1$

F -8

G -7

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

J $-\frac{7}{8}$

13 Line a passes through $(-12, 7)$ and $(9, -2)$. What is the slope of line a?

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

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

C $\frac{3}{7}$

D $\frac{7}{3}$

14 The table below represents a linear function.

x	*y*
−2	−14
−1	−12
0	−10
1	−8

What is the slope of the graph of this function?

F -10

G -2

H 2

J 10

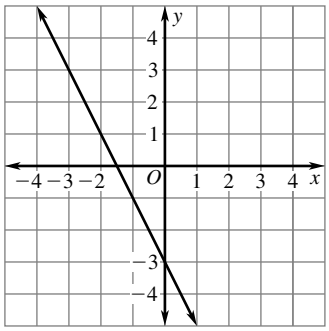
GO ON

Name _____ Date _____

SPI 0806.3.6

Analyze the graph of a linear function to find solutions and intercepts.

1 Which linear function does this graph represent?



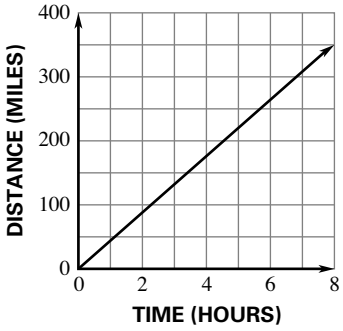
A $f(x) = -\frac{1}{2}x - 3$

B $f(x) = 6x - 3$

C $f(x) = -2x - 3$

D $f(x) = \frac{1}{2}x + 3$

2 This graph shows a linear relationship shared by time and distance.



Find the distance at 12 hours.

F 350 miles

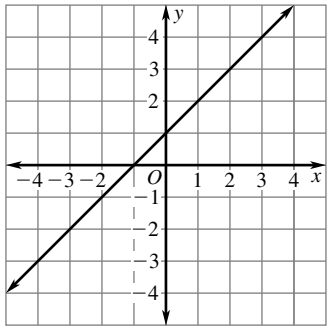
G 400 miles

H 420 miles

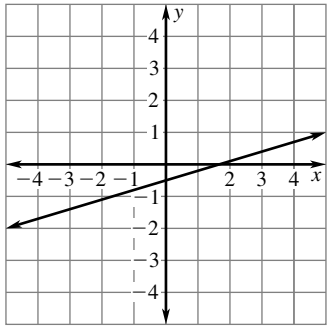
J 450 miles

3 The graphs below show four different linear functions. Which graph intersects the *x*- and *y*-axis at the origin of the coordinate plane?

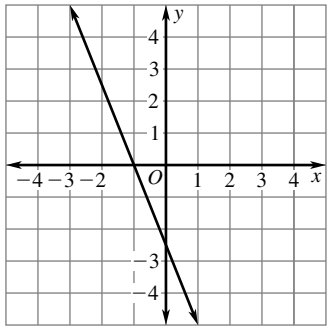
A



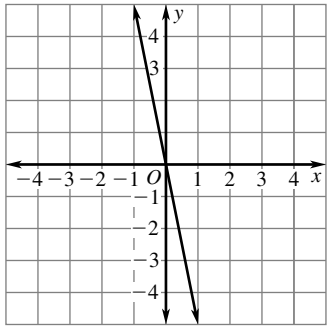
B



C



D



GO ON

Name _____ Date _____

SPI 0806.3.6 (continued)

4 The ordered pair $(-1, 5)$ is a solution of which linear function?

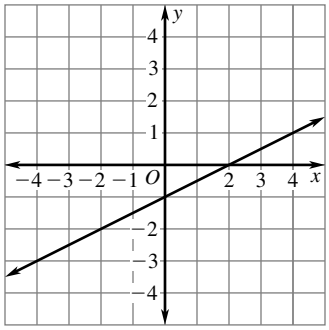
F $f(x) = x + 6$

G $f(x) = 2x - 3$

H $f(x) = -5x + 1$

J $f(x) = x - 6$

5 Which ordered pair is a solution of this linear function?



A $(-1, 0)$

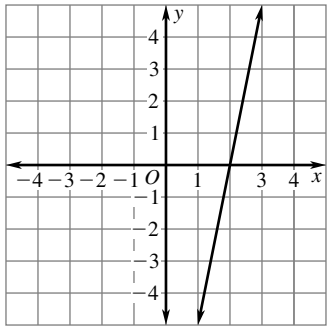
B $(4, 1)$

C $(-4, 3)$

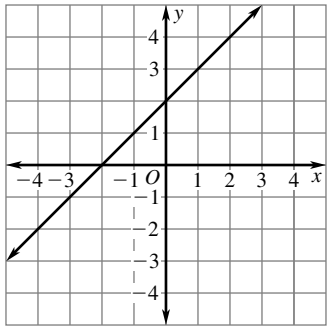
D $(0, 2)$

6 Which graph appears to have a y-intercept of -2?

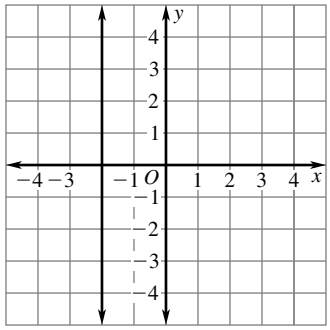
F



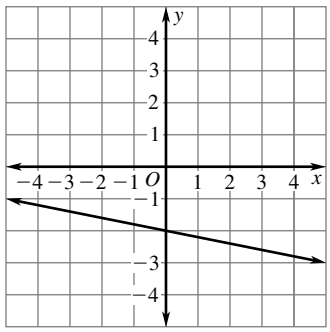
G



H



J



GO ON

Name _____ Date _____

SPI 0806.3.6 (continued)

7 Which ordered pair is a solution of $x + y = -4$?

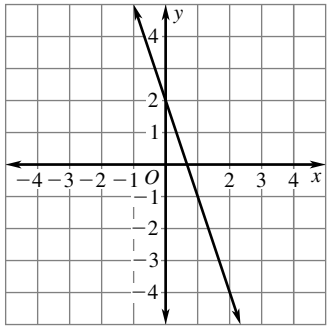
A $(0, 4)$

B $(4, 0)$

C $(-4, 0)$

D $(-4, -4)$

8 Which linear function does this graph represent?



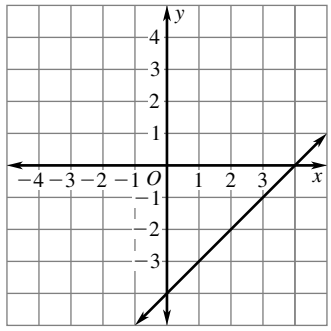
F $f(x) = -x + 2$

G $f(x) = 3x + 2$

H $f(x) = -2x + 3$

J $f(x) = -3x + 2$

9 The graph of the linear function $f(x) = x - 4$ is shown below.



What is the y-intercept of the function?

A -4

B 4

C $-\frac{1}{4}$

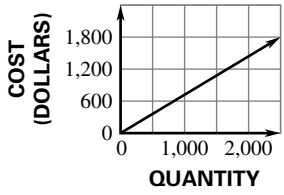
D $\frac{-4}{4}$

GO ON

Name _____ Date _____

SPI 0806.3.6 (continued)

10 This graph shows a linear relationship shared by quantity and cost.



What is the cost for a quantity of 4,000?

F $2,650

G $2,880

H $2,995

J $5,555

11 Which ordered pair is a solution of $y = x - 2$?

A (2, 4)

B (−3, 1)

C (−2, 0)

D (1, −1)

12 Where does the graph of $x = 1$ intersect the y-axis?

F (0, 1)

G (0, −1)

H The graph does not intersect the y-axis.

J The graph is the y-axis of the coordinate plane.

GO ON

Name _____ Date _____

SPI 0806.3.7

Identify, compare and contrast functions as linear or nonlinear.

1 Which statement about linear and nonlinear functions is *always* true?

A The graph of a nonlinear function has a positive slope.

B The graph of a linear function has a negative slope.

C The graph of a nonlinear function is parallel to the x-axis.

D The graph of a linear function is a line.

2 Which equation represents a linear function?

F $3x = y$

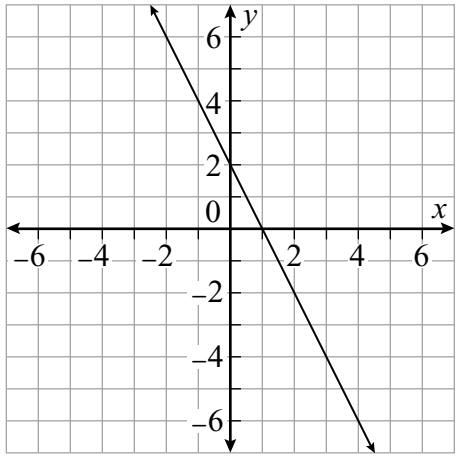
G $y = x^2$

H $y = -x^3$

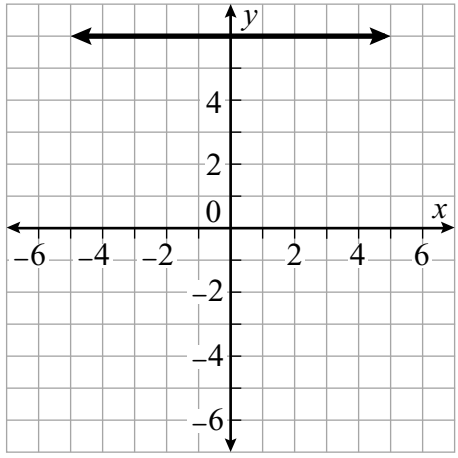
J $-x^4 = y + 5$

3 Each of these graphs is the graph of a linear function, except which one?

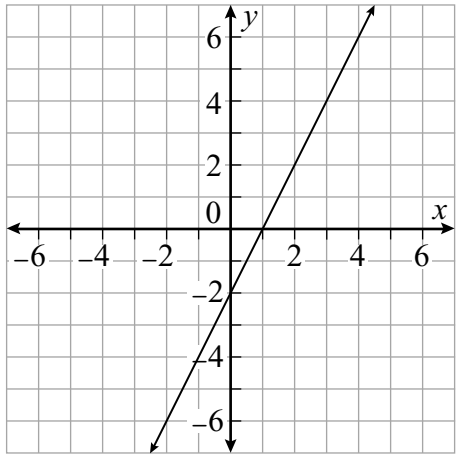
A



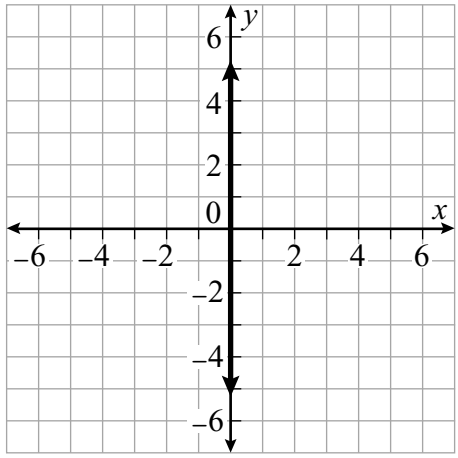
B



C



D



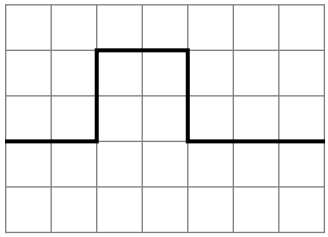
GO ON

Name _____ Date _____

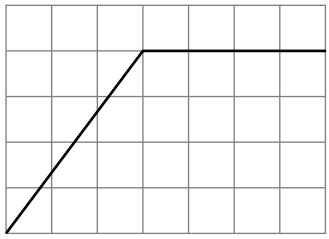
SPI 0806.3.7 (continued)

4 Which graph is the graph of a function?

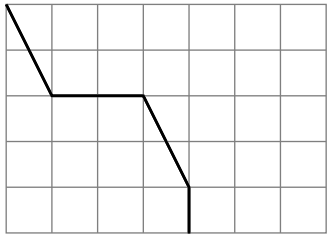
F



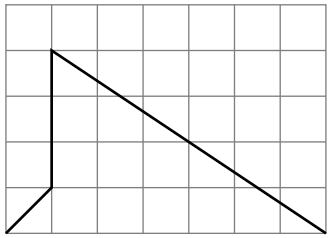
G



H



J



5 Each table of values represents points on the graphs of four different lines.

x	*y*
0	0
1	3
2	6
3	9

x	*y*
0	0
2	3
4	6
6	9

x	*y*
0	0
3	3
6	6
9	9

x	*y*
0	5
3	7
6	9
9	11

Which statement about the graphs of the lines is true?

A None of the lines represent linear functions.

B One line represents a linear function.

C Three lines represent linear functions.

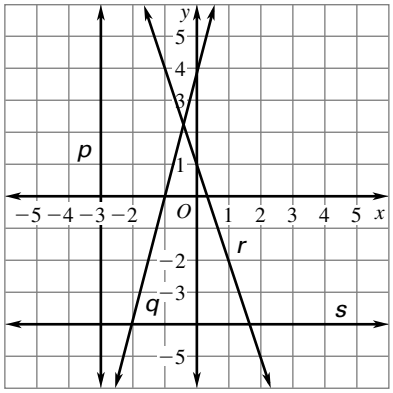
D All of the lines represent linear functions.

GO ON

Name _____ Date _____

SPI 0806.3.7 (continued)

6 Which lines represent the graph of a function?



F lines q and r

G lines s and p

H lines q, r, and s

J lines p, q, r, and s

7 Which statement about functions and linear functions is true?

A The graph of a function may have an undefined slope.

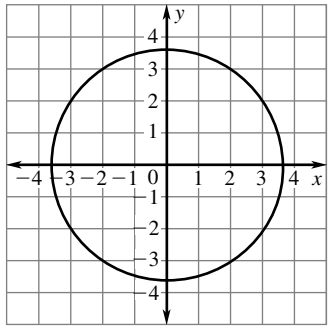
B The graph of a linear function may have an undefined slope.

C The graph of a linear function may be parallel to the x-axis.

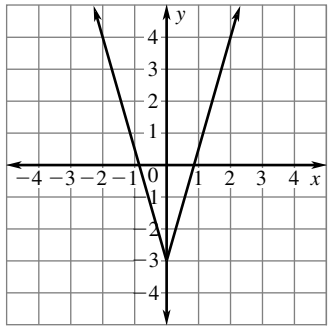
D The graph of a linear function may be parallel to the y-axis.

8 Which graph is the graph of a *linear* function?

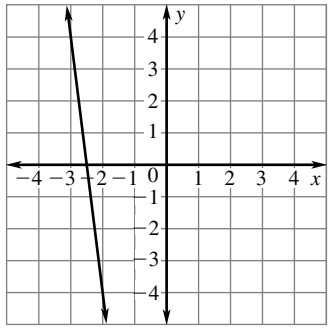
F



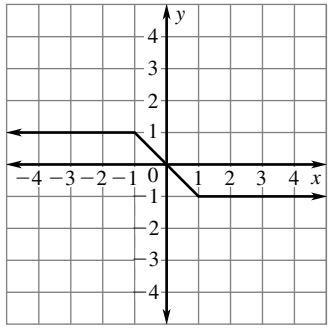
G



H



J



GO ON

Name _____ Date _____

SPI 0806.3.7 (continued)

9 This chart shows the unit cost per item for quantities in multiples of 1,000.

Quantity	Unit Cost
1,000	\$0.15
2,000	\$0.14
3,000	\$0.13
4,000	\$0.12
5,000	\$0.10

Is the relationship shared by the data an example of a linear function? Why or why not?

A No, because graphing the data requires axes that are not labeled x and y.

B No, because the graph of the data is not a straight line.

C Yes, because any multiple of 1,000 can be purchased at a fixed unit cost.

D Yes, because the data can be graphed.

10 Which equation represents a linear function?

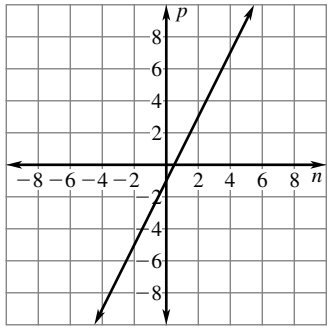
F $x^3 + 2 = y$

G $y + \frac{x}{2} = -1$

H $y = 2x^2$

J $y = x^4 + 3$

11 In this graph of a linear function, what relationship appears to be shared by the n- and p-coordinates of points on the line?



A The value of p is 1 less than twice the value of n.

B The value of n is 1 less than twice the value of p.

C The value of p is one-half the value of n.

D The value of n is greater than the value of p.

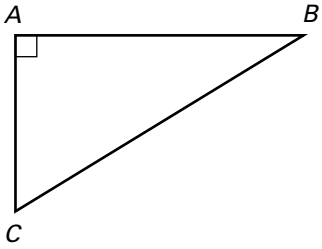
GO ON

Name _____ Date _____

SPI 0806.4.1

Use the Pythagorean Theorem to solve contextual problems.

1 In the triangle, which is the hypotenuse?



A line segment AB

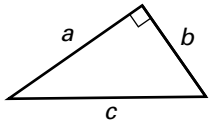
B line segment BC

C angle A

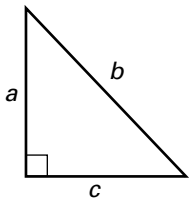
D line segment AC

2 Which figure best represents a triangle with sides a, b, and c in which the relationship $a^2 + b^2 = c^2$ is always true?

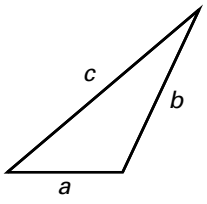
F



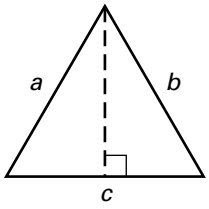
G



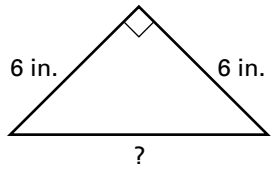
H



J



3 Brittany designs a stained-glass window with a right triangle in the center, as shown below.



Which is closest to the length of the triangle's hypotenuse?

A 72.0 in.

B 36.0 in.

C 12.0 in.

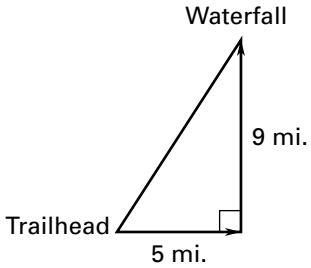
D 8.5 in.

GO ON

Name _____ Date _____

SPI 0806.4.1 (continued)

4 Michael leaves a trailhead and hikes 5 miles east and 9 miles north to a waterfall.



Which is closest to the straight-line distance from the trailhead to the waterfall?

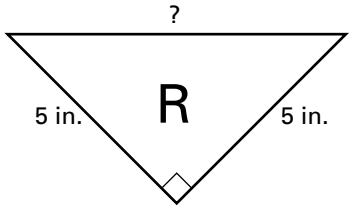
F 7.0 mi

G 7.5 mi

H 10.3 mi

J 14.0 mi

5 Rachel creates a logo in the shape of a right triangle to print on T-shirts for her lawn-mowing business, as shown below.



What is the length of the longest side in the triangle?

A $5\sqrt{2}$ in.

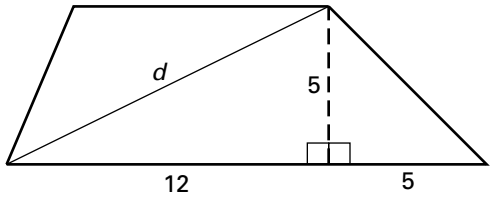
B $5\sqrt{5}$ in.

C $5\sqrt{10}$ in.

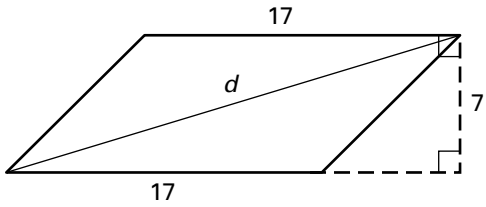
D 50 in.

6 Line segment d is a diagonal in each polygon shown below. Which drawing shows enough information to find the length of line segment d?

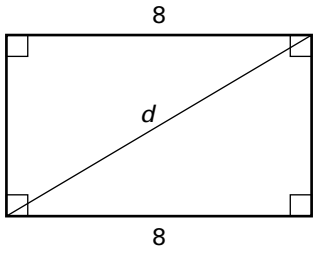
F



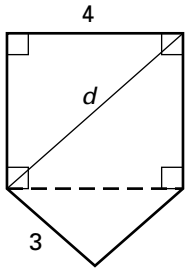
G



H



J



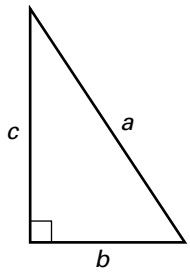
GO ON

Name _____ Date _____

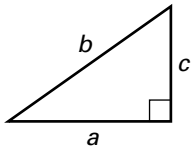
SPI 0806.4.1 (continued)

7 Which figure best represents a triangle with sides a, b, and c in which the relationship $a^2 + b^2 = c^2$ is always true?

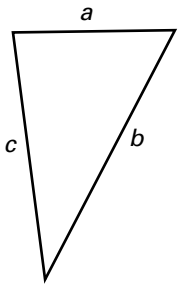
A



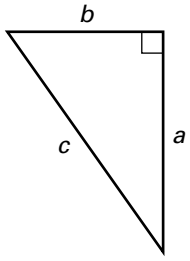
C



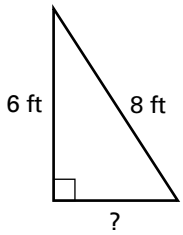
B



D



8 Mr. Fry uses a straight piece of wood that is 8 feet long to prop up an old fence, as shown in the figure.



If the fence is 6 feet tall, how far from the fence is the bottom of the piece of wood?

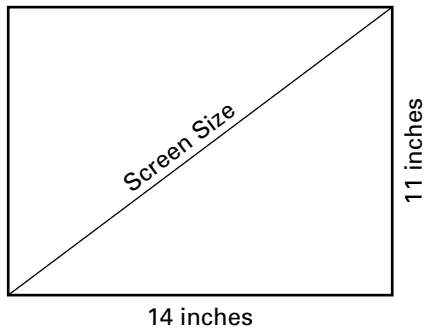
F 28 ft

G 10 ft

H 7 ft

J $2\sqrt{7}$ ft

9 The screen size of a computer monitor is given by the measure of its diagonal.



What is the screen size of a monitor with the dimensions shown above? Round your answer to the nearest whole number.

A 16 in.

B 18 in.

C 20 in.

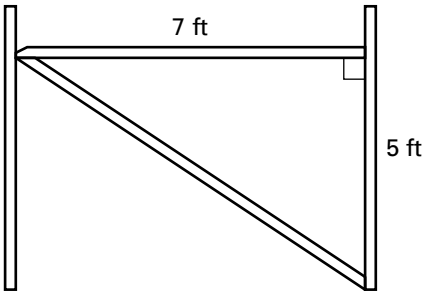
D 22 in.

GO ON

Name _____ Date _____

SPI 0806.4.1 (continued)

10 Tyler is designing a loft bed with a diagonal support, as shown below.



What is the length of the diagonal support, to the nearest tenth of a foot?

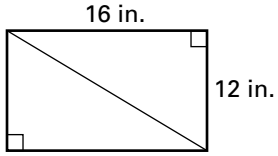
F 7.2 ft

G 7.5 ft

H 8.6 ft

J 12.0 ft

11 In the shipping box shown in the figure below, a diagonal divider keeps two bowls from scratching each other.



If the dimensions of the box are 16 inches by 12 inches, what is the length of the divider?

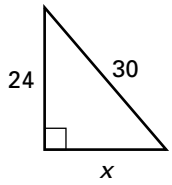
A 18 in.

B 20 in.

C 24 in.

D 32 in.

12 Anthony is using the Pythagorean Theorem to find the length of the missing side below.



Which equation should Anthony use?

F $24^2 + x^2 = 30^2$

G $24 + x = 30$

H $24^2 + 30^2 = x^2$

J $30^2 + x^2 = 24^2$

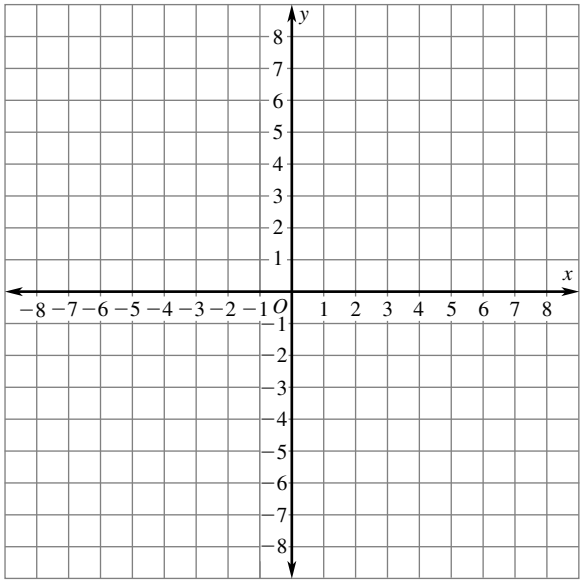
GO ON

Name _____ Date _____

SPI 0806.4.2

Apply the Pythagorean theorem to find distances between points in the coordinate plane to measure lengths and analyze polygons and polyhedra.

1 A right triangle in the coordinate plane has vertices at (0, 6), (8, 0), and (0, 0). What is the length of the hypotenuse?



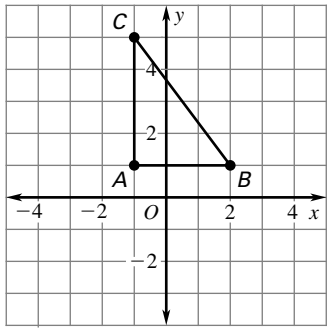
A $2\sqrt{7}$ units

B 10 units

C 12 units

D 100 units

2 What is the length of $\overline{BC}$?



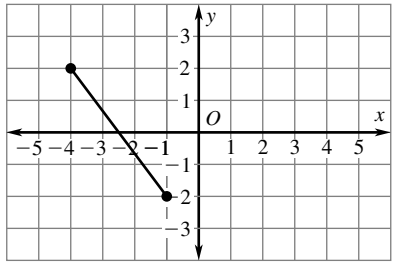
F 4 units

G 5 units

H $5.\overline{5}$ units

J 6 units

3 What is the length of a line segment with endpoints of $(-4, 2)$ and $(-1, -2)$?



A 1 units

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

C 5 units

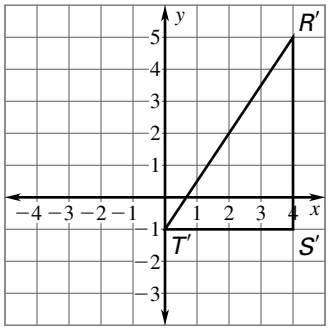
D 25 units

GO ON

Name _____ Date _____

SPI 0806.4.2 (continued)

4 To the nearest tenth, what is the distance from R' to T'?



F $2\sqrt{5}$ units

G $2\sqrt{13}$ units

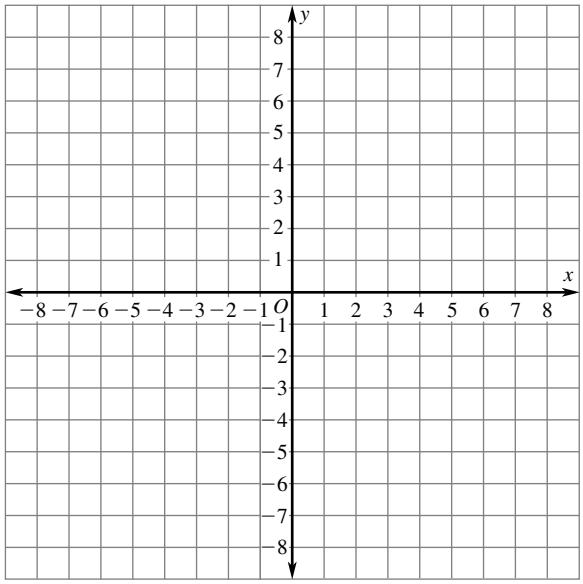
H 7 units

J 52 units

5 The vertices of isosceles triangle ABC are given below.

$A\ (-8, 0)\ B\ (0, -8)\ C\ (8, 8)$

Plot the triangle. Then find the length of $\overline{AC}$ to the nearest tenth.



A 16.1 units

B 17.6 units

C 17.9 units

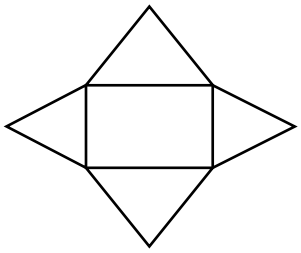
D 19.2 units

GO ON

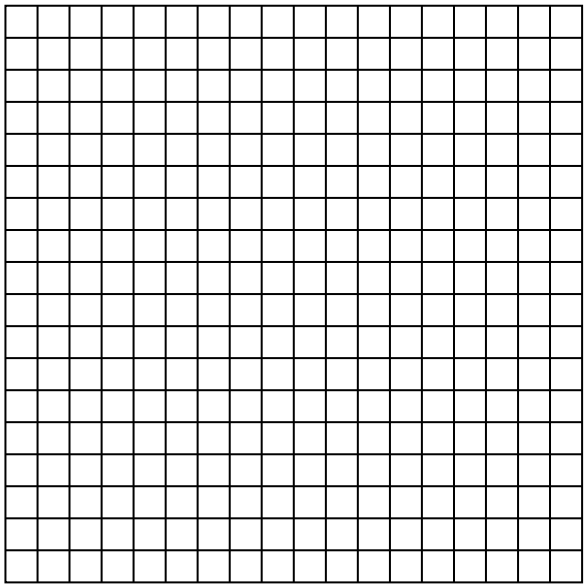
Name _____ Date _____

SPI 0806.4.2 (continued)

6 The base of a rectangular pyramid model measures 3 inches by 5 inches.



To the nearest tenth of an inch, what is the distance from any vertex of the base to the point at the center of the base?



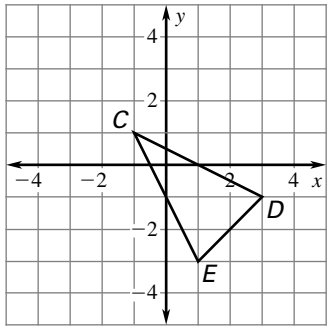
F 2.5 in.

G 2.9 in.

H 3.4 in.

J 5.8 in.

7 What is the measure of $\overline{CD}$?



A $5\sqrt{2}$ units

B $2\sqrt{3}$ units

C $2\sqrt{5}$ units

D $4\sqrt{6}$ units

8 What is the length of the diagonal of a coordinate plane with x- and y-axes labeled from -10 to 10?

F $400\sqrt{2}$ units

G 20 units

H 100 units

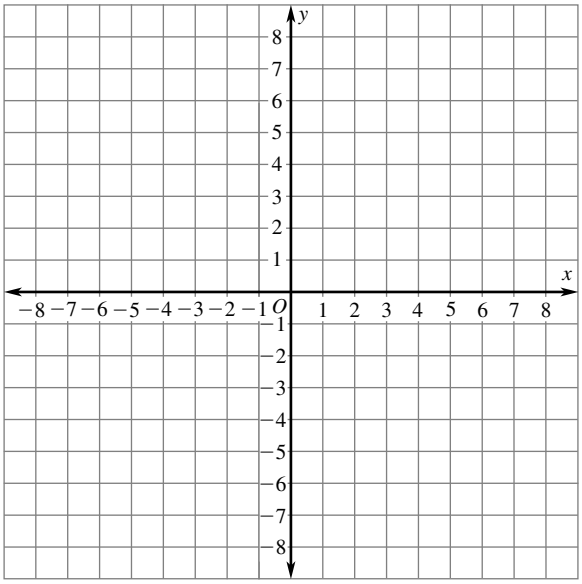
J $20\sqrt{2}$ units

GO ON

Name _____ Date _____

SPI 0806.4.2 (continued)

9 The endpoints of a line segment in the coordinate plane are (1, 2) and (1, 5). Which other endpoint will form a right triangle with a hypotenuse that is 5 units long?



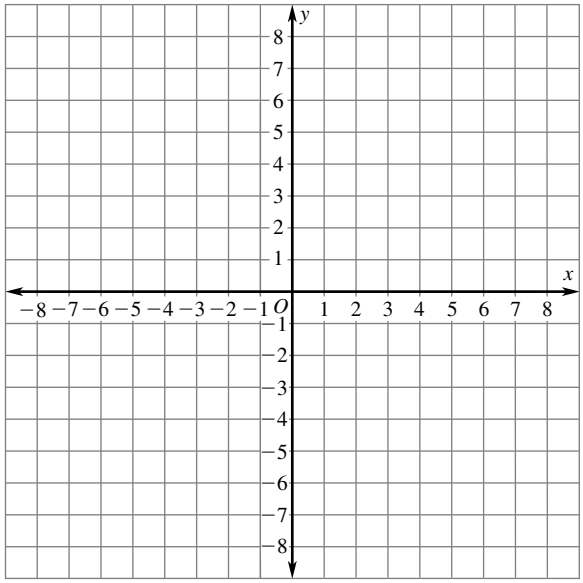
A (5, 5)

B (2, 5)

C (−2, 3)

D (−5, 2)

10 A line segment from the origin of the coordinate plane to (5, −5) represents the hypotenuse of a right triangle. What is the length of the hypotenuse?



F $5\sqrt{2}$

G $2\sqrt{5}$

H 5

J 25

GO ON

Name _____ Date _____

SPI 0806.4.3

Find measures of the angles formed by parallel lines cut by a transversal.

1 How many congruent acute angles are formed by the intersection of a transversal and two parallel lines if the transversal intersects the lines at an oblique angle?

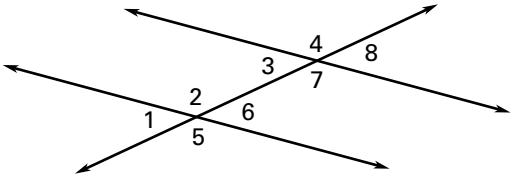
A none

B 2

C 4

D 8

2 The parallel lines below are intersected by a transversal. The measure of $\angle 8$ is 38°. What is the measure of $\angle 2$?



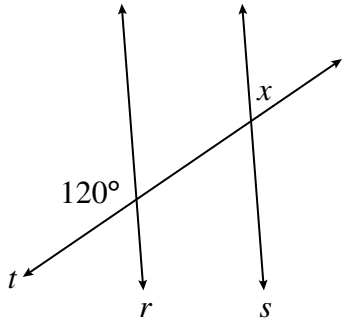
F 38°

G 52°

H 142°

J 152°

3 In the diagram below, lines r and s are parallel.



What is the measure of angle x?

A 60°

B 90°

C 120°

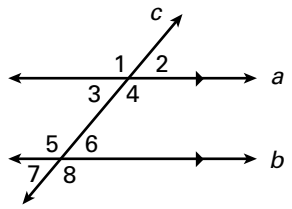
D 180°

GO ON

Name _____ Date _____

SPI 0806.4.3 (continued)

4 In the diagram below, transversal c intersects parallel lines a and b.



The measure of $\angle 6$ is 49°. What is the measure of $\angle 3$?

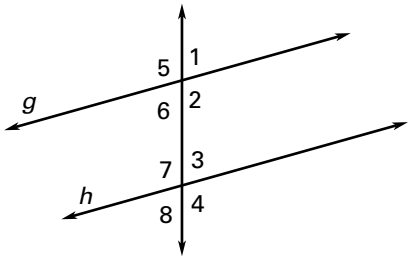
F 41°

G 49°

H 131°

J 229°

5 In the diagram below, lines g and h are parallel. The measure of $\angle 5$ is 107°. What is the measure of $\angle 3$?



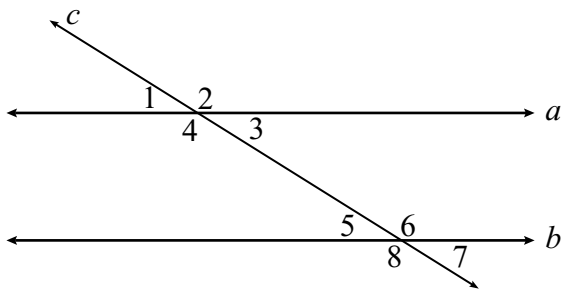
A 17°

B 73°

C 93°

D 107°

6 TIn the diagram below, transversal c intersects parallel lines a and b.



The measure of $\angle 7$ is 31°. What is the measure of $\angle 6$?

F 59°

G 121°

H 151°

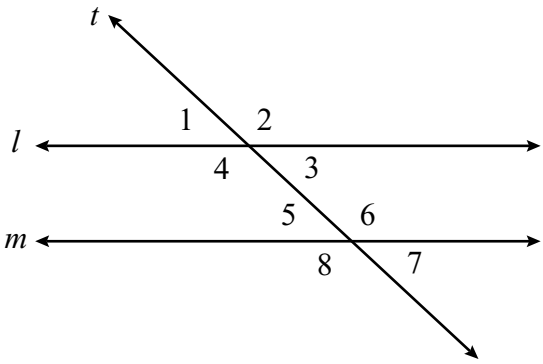
J 149°

GO ON

Name _____ Date _____

SPI 0806.4.3 (continued)

7 Parallel lines l and m below are intersected by transversal t.



The measure of $\angle 4$ is 137°. What is the measure of $\angle 5$?

A 43°

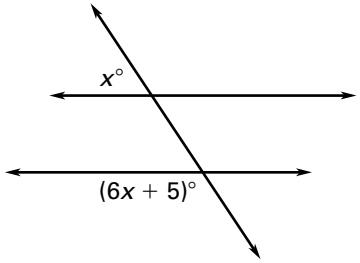
B 53°

C 137°

D 223°

8 The parallel lines below are intersected by a transversal.

Find the approximate value of x.



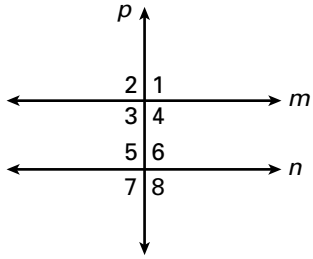
F 12

G 25

H 105

J 155

9 In the diagram below, lines m and n are parallel. Angle 1 is a right angle.



Which of the following is true?

A All eight angles are right angles.

B Only $\angle 2$, $\angle 4$, $\angle 5$, and $\angle 8$ are right angles.

C Only $\angle 1$, $\angle 3$, $\angle 6$, and $\angle 7$ are right angles.

D All eight angles are complementary angles.

GO ON

Name _____ Date _____

SPI 0806.4.3 (continued)

10 A transversal intersects two parallel lines at an oblique angle. The acute angles formed by the intersection measure 64°. What is the measure of the obtuse angles formed by the intersection?

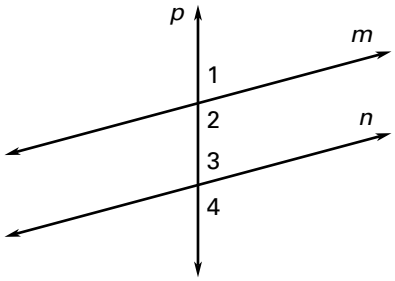
F 26°

G 116°

H 128°

J 296°

11 In the diagram below, transversal p intersects parallel lines m and n.



Compare angles 1, 2, 3, and 4. Which statement below is true?

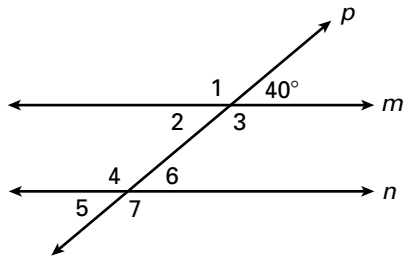
A The angles are congruent.

B The angles are complementary.

C The sum of the angle measures is 180°.

D The sum of the angle measures is 360°.

12 Parallel lines m and n below are intersected by transversal p.



How many angles formed by the intersection are congruent to the given angle?

F none

G 1

H 2

J 3

GO ON

Name _____ Date _____

SPI 0806.4.4

Convert between and within the U.S. Customary System and the metric system.

1 Each day, a jewelry factory produces 800 rings, each containing an average of 4 grams of gold. How many kilograms of gold are used in a 30-day month?

A 6 kilograms

B 9.6 kilograms

C 96 kilograms

D 960 kilograms

2 A loaded truck and trailer weigh $32\frac{1}{2}$ tons. What is this weight in pounds?

F 32,500 pounds

G 64,005 pounds

H 64,500 pounds

J 65,000 pounds

3 An aquarium holds 25 gallons of water. Janice has only a 12 ounce can with which to fill it. How many cans will it take to fill the aquarium?

A 134 cans

B 200 cans

C 267 cans

D 300 cans

4 Which is equivalent to 24 milliliters?

F 0.024 liter

G 0.24 liter

H 2.4 liters

J 2,400 liters

GO ON

Name _____ Date _____

SPI 0806.4.4 (continued)

5 The area of a trapezoid is 0.75 square meters. Which is another way to describe the area of the trapezoid?

A 7.5 square centimeters

B 75 square centimeters

C 750 square centimeters

D 7,500 square centimeters

6 The capacity of a pitcher is 2 quarts. What is the capacity in pints?

F 1 pint

G 4 pints

H 8 pints

J 16 pints

7 Which is equivalent to 0.007 grams?

A 7 milligrams

B 70 milligrams

C 700 milligrams

D 7000 milligrams

8 A package weighs $2\frac{1}{2}$ pounds. What is the weight of the package in ounces?

F 24 ounces

G 36 ounces

H 40 ounces

J 48 ounces

GO ON

Name _____ Date _____

SPI 0806.4.4 (continued)

9 Ben calls from Alaska and tells you the temperature there is −40°F. Then Zia calls from Russia and tells you the temperature there is −40°C. Which statement is true?

A The temperature is lower in Alaska.

B The temperature is lower in Russia.

C The temperature is the same in Alaska and Russia.

D Because Alaska and Russia are in different hemispheres, you cannot directly compare the temperatures.

10 The average adult heart pumps about 5,500 quarts of blood each day. How many gallons is this?

F 690 gal

G 920 gal

H 1,375 gal

J 2,750 gal

11 Fernando needs a 4 yard length of silk. How many inches long should the silk be?

A 12 in.

B 48 in.

C 144 in.

D 192 in.

12 Which computation is used to change any number of centimeters to meters?

F Multiply the number of centimeters by 10.

G Divide the number of centimeters by 10.

H Multiply the number of centimeters by 100.

J Divide the number of centimeters by 100.

GO ON

Name _____ Date _____

SPI 0806.4.4 (continued)

13 In measures of capacity, 1 quart = 32 fluid ounces and 1 liter ≈ 33.8 fluid ounces. One gallon is approximately equal to what number of liters?

A 3.8 liters

B 4.2 liters

C 38 liters

D 42 liters

14 The indoor temperature is 72°F. About what is the temperature in degrees Celsius (°C)? ($F = \frac{9}{5} C + 32$)

F 22°C

G 72°C

H 162°C

J 187°C

15 The distance of a full marathon—such as the Boston Marathon—is 26 miles 385 yards. Suppose the length of a marathon runner's stride is 18 inches. About how many strides will the runner require to complete a full marathon?

A about 92,300 strides

B about 94,500 strides

C about 7,690 strides

D about 2,490,000 strides

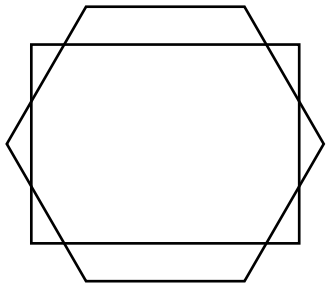
GO ON

Name _____ Date _____

SPI 0806.4.5

Identify the intersection of two or more geometric figures in the plane.

1 The intersection of a rectangle and a regular hexagon is shown below.



The intersection of these two shapes is best described as

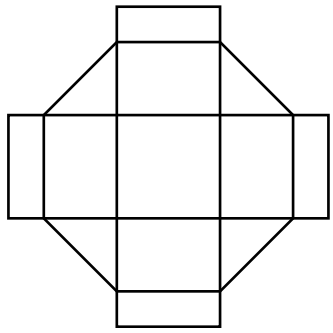
A exactly 8 points

B exactly 6 line segments

C exactly 20 points

D exactly 10 line segments

2 The intersection of two congruent rectangles and one regular octagon is shown below.



The intersection of these three shapes is best described as

F exactly 4 points

G exactly 8 line segments

H exactly 8 points

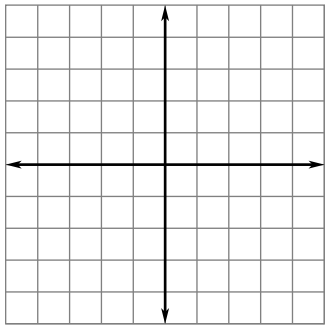
J exactly 24 line segments

GO ON

Name _____ Date _____

SPI 0806.4.5 (continued)

3 In the coordinate plane, a line is a perpendicular bisector of a line segment. The endpoints of the segment are $\left(-\frac{3}{2}, 1\right)$ and (1, 1). What ordered pair represents the point of intersection?



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

B $\left(-\frac{1}{4}, 1\right)$

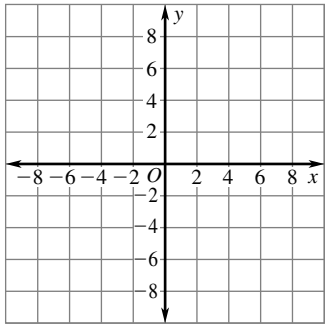
C $\left(-\frac{1}{2}, 1\right)$

D $\left(-\frac{3}{4}, 1\right)$

4 These equations represent two lines.

$$y = \frac{x}{2} \qquad y = -\frac{x}{2} + 2$$

At what point in the coordinate plane will the graphs of the equations intersect?



F (1, 2)

G (2, 1)

H (−1, 2)

J (−2, 1)

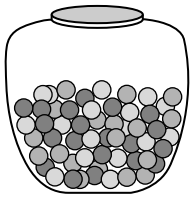
GO ON

Name _____ Date _____

SPI 0806.5.1

Calculate probabilities of events for simple experiments with equally probable outcomes.

1 A jar is filled with 100 marbles, and 45 of the marbles are black. The rest are red. What is the probability of choosing a marble that is not red?



A $\frac{5}{12}$

B $\frac{9}{20}$

C $\frac{11}{20}$

D $\frac{13}{20}$

2 The ratio of male students to female students in a class is 3:5. If one student is randomly chosen, what is the probability that the student is female?

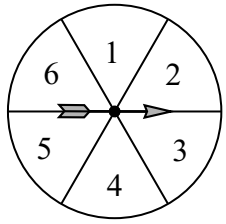
F $\frac{3}{5}$

G $\frac{3}{8}$

H $\frac{5}{3}$

J $\frac{5}{8}$

3 Suppose this spinner is spun once. What is the probability that the outcome will not be a prime number?



A $\frac{1}{2}$

B $\frac{1}{3}$

C $\frac{2}{3}$

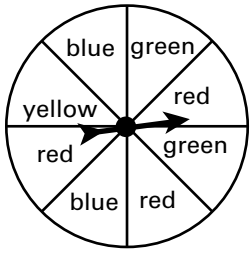
D $\frac{5}{6}$

GO ON

Name _____ Date _____

SPI 0806.5.1 (continued)

4 Red, yellow, and blue are sometimes called the primary colors. Suppose the spinner below is spun once.



Expressed as a decimal, what is the likelihood that the spinner outcome will be a primary color?

F 0.5

G 0.625

H 0.75

J 0.875

5 The probability of choosing a red counter from a jar of counters is $\frac{9}{25}$. What is the probability of <u>not</u> choosing a red counter from the jar?

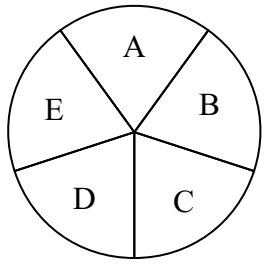
A $\frac{3}{5}$

B $\frac{9}{25}$

C $\frac{14}{25}$

D $\frac{16}{25}$

6 Suppose this spinner is spun once.



Expressed as a percent, what is the probability that the outcome will be a vowel?

F 20%

G 40%

H 60%

J 80%

GO ON

Name _____ Date _____

SPI 0806.5.1 (continued)

7 Suppose a letter of the alphabet is randomly chosen. What is the probability that it will be a letter that is found in the word *arithmetic*?

A $\frac{4}{13}$

B $\frac{5}{13}$

C $\frac{7}{26}$

D $\frac{9}{26}$

8 Twice as many female students as male students are enrolled in a class. If the name of one student is randomly chosen, what is the likelihood that the name of a male student will be chosen?

F $\frac{1}{2}$

G $\frac{1}{3}$

H $\frac{1}{4}$

J $\frac{2}{3}$

9 What is the probability of tossing a cube with faces numbered 1–6 and finding the outcome to be a square number?

A 0

B $\frac{1}{3}$

C $\frac{1}{2}$

D $\frac{2}{3}$

10 Suppose a letter of the alphabet is randomly chosen. What is the probability that it will be a letter that is found in the word *mathematics*?

F $\frac{4}{13}$

G $\frac{7}{26}$

H $\frac{9}{26}$

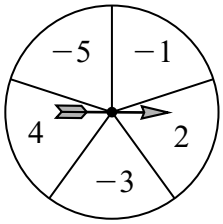
J $\frac{11}{26}$

GO ON

Name _____ Date _____

SPI 0806.5.1 (continued)

11 Suppose this spinner is spun once.



Expressed as a percent, what is the probability that the outcome will be an integer?

A 0%

B 40%

C 60%

D 100%

12 A card is randomly selected from the cards shown below.

1	2	3	4	5	6	7	8

What is the probability that the selected card will be a multiple of 2?

F $\frac{1}{2}$

G $\frac{1}{4}$

H $\frac{1}{8}$

J $\frac{3}{8}$

GO ON

Name _____ Date _____

SPI 0806.5.2

Use a variety of methods to compute probabilities for compound events (e.g., multiplication, organized lists, tree diagrams, area models).

1 There are 20 marbles in a bag. Of the marbles, half are white and 2 are blue. The remaining marbles are red. If a marble is to be selected at random, what is the probability that the selected marble will be blue or white?

A $\frac{8}{20}$

B $\frac{10}{20}$

C $\frac{12}{20}$

D $\frac{18}{20}$

2 Suppose a cube numbered 1–6 is rolled three times. What is the probability of rolling an even number, followed by an odd number, followed by an even number?

F $\frac{1}{2}$

G $\frac{1}{3}$

H $\frac{1}{8}$

J $\frac{9}{40}$

3 A standard deck of cards has four different suits: hearts, diamonds, spades, and clubs. Each suit has 13 cards, making a total of 52. Two cards are drawn without replacement. What is the probability of drawing first a heart, and then a spade?

A $\frac{13}{208}$

B $\frac{169}{2{,}704}$

C $\frac{1}{16}$

D $\frac{13}{204}$

4 Three coins are tossed at the same time. What is the likelihood, expressed as a percent, that the outcome of each coin will be the same?

F 25%

G 50%

H $33.\overline{3}\%$

J 150%

GO ON

Name _____ Date _____

SPI 0806.5.2 (continued)

5 Lee Ann is going on a trip. She packs a blue shirt, a white shirt, and a green shirt. She also packs one blue pair of pants and one tan pair of pants. She drew this tree diagram to show the possible outfits she can wear.

shirt	pants	outcomes
blue	blue	blue, blue
	tan	blue, tan
white	blue	white, blue
	tan	white, tan
green	blue	green, blue
	tan	green, tan

What is the probability that one part of the outfit she wears will be green and another part will be tan?

A $\frac{1}{6}$

B $\frac{2}{3}$

C $\frac{4}{9}$

D 0

6 A bag contains 2 black marbles and 2 yellow marbles. A marble is drawn at random from the bag, then replaced. A second marble is then drawn. What is the probability that both marbles are black?

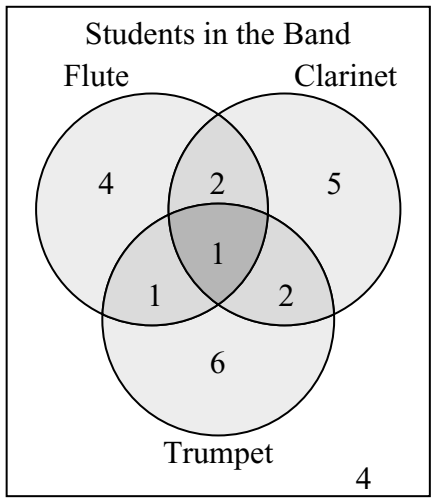
F $\frac{1}{2}$

G $\frac{1}{3}$

H $\frac{1}{4}$

J $\frac{1}{8}$

7 There are 25 students in the band. The Venn diagram shows the instruments some of the students play.



What is the probability that a student plays the flute or the clarinet?

A $\frac{3}{25}$

B $\frac{9}{25}$

C $\frac{3}{5}$

D $\frac{5}{7}$

8 Two cubes numbered 1–6 were tossed as part of a probability experiment. What is the probability that the outcome of one cube was a number greater than 3 and the outcome of the other cube was a number less than 4?

F $\frac{1}{2}$

G $\frac{1}{4}$

H $\frac{1}{6}$

J $\frac{2}{3}$

GO ON

Name _____ Date _____

SPI 0806.5.2 (continued)

9 The first five letters of the alphabet, A, B, C, D, and E are written on five chips. Three chips are drawn at random, without replacement. What is the probability they spell out B-A-D in order?

A $\frac{1}{125}$

B $\frac{3}{60}$

C $\frac{1}{60}$

D $\frac{1}{12}$

10 Heather randomly draws a straw from a box containing 7 white straws, 4 blue straws, 3 green straws, and 2 red straws. Then she replaces the straw and draws a straw again. What is the probability that she draws a red straw the first time and a blue straw the second time?

F $\frac{1}{32}$

G $\frac{1}{21}$

H $\frac{3}{8}$

J $\frac{1}{2}$

11 A card will be randomly selected from the cards shown below, and then replaced. A second card will then be selected.

2	4	6	8	10
12	14	16	18	20

What percent represents the likelihood that the first card is 14 and the second card is a multiple of 3?

A 3%

B 10%

C 30%

D 40%

12 A cheese sandwich is made from white or wheat bread, cheddar, brick or pepperjack cheese, and low-fat mayonnaise or mustard. If these ingredients are randomly selected, what is the likelihood of a wheat bread, cheddar cheese, and mustard sandwich?

F $\frac{1}{4}$

G $\frac{1}{7}$

H $\frac{1}{12}$

J $\frac{3}{8}$

GO ON

Name _____ Date _____

SPI 0806.5.2 (continued)

13 Two number cubes with faces labeled 1–6 are tossed at the same time. What is the probability that the product of the outcomes will be an even number?

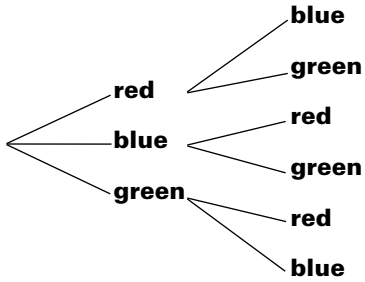
A $\frac{2}{3}$

B $\frac{1}{2}$

C $\frac{1}{4}$

D $\frac{3}{4}$

14 What probability does this tree diagram model?



F selecting two marbles from a bag that contains three red marbles, three blue marbles, and three green marbles

G selecting three marbles from a bag that contains three red marbles, three blue marbles, and three green marbles

H selecting two marbles from a bag that contains a red, blue, and green marble when the first marble is replaced

J selecting two marbles from a bag that contains a red, blue, and green marble when the first marble is not replaced

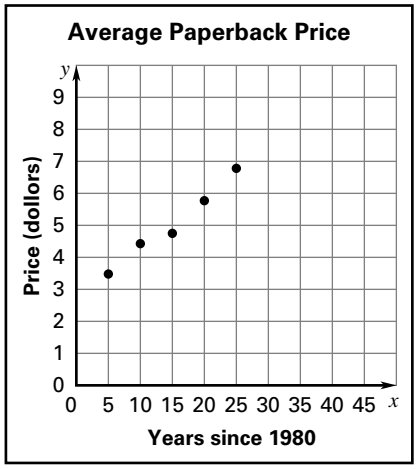
GO ON

Name _____ Date _____

SPI 0806.5.3

Generalize the relationship between two sets of data using scatterplots and lines of best fit.

1 The scatterplot below shows the average price of a paperback book at a local bookstore, where x represents years after 1980.



Based on the information in the scatterplot, what do you predict the average price of a paperback book will be in 2020?

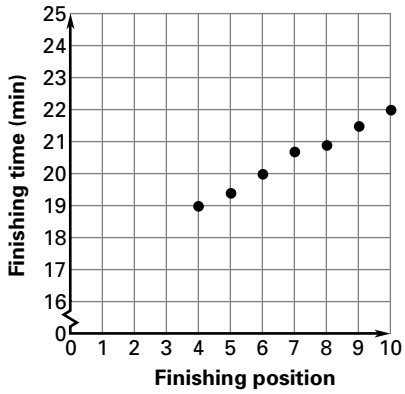
A $10.00

B $9.00

C $8.00

D $7.00

2 The scatterplot below shows data about some runners in a race.



What do you predict was the finishing time of the second-place runner?

F 17 min

G 18 min

H 19 min

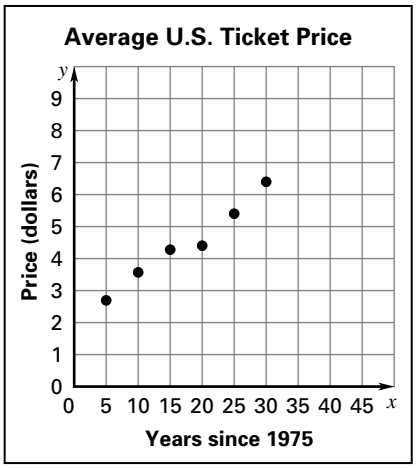
J 22 min

GO ON

Name _____ Date _____

SPI 0806.5.3 (continued)

3 The scatterplot below shows the average cost of movie tickets in the United States, where x represents years after 1975.



Based on the information in the scatterplot, what do you predict the average U.S. ticket price will be in 2020?

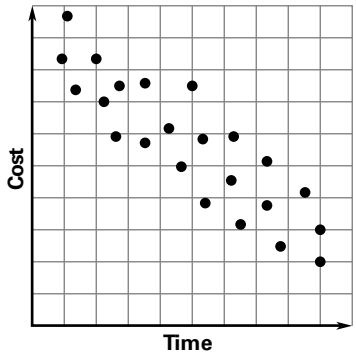
A $6.50

B $7.50

C $8.50

D $9.50

4 What general statement is true about the relationship of the data in this scatterplot?



F As elapsed time increases, cost increases.

G As cost increases, elapsed time decreases.

H As elapsed time increases, cost remains the same.

J The data show no correlation.

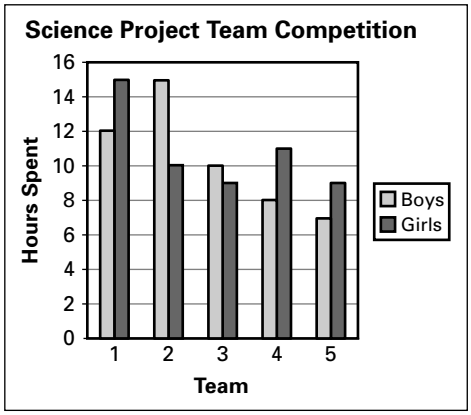
GO ON

Name _____ Date _____

SPI 0806.5.4

Recognize misrepresentations of published data in the media.

1 A school newspaper editor created the bar graph below to show number of teams and students who participated in a science project competition.



Before publishing the graph, how can the editor change the graph to make the differences between teams less apparent?

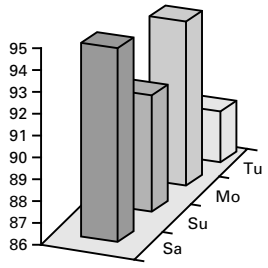
A Increase the space between bars.

B Increase the height of the graph.

C Label the vertical axis by ones instead of by twos.

D Label the vertical axis by fours instead of by twos.

2 The graph below shows the high temperatures over a four-day Fourth of July weekend one summer.



From the graph it appears that Saturday was the hottest day. Which statement explains why this claim may be inaccurate?

F The vertical axis does not start at 0.

G The three-dimensional view distorts relative sizes.

H The graph has no title.

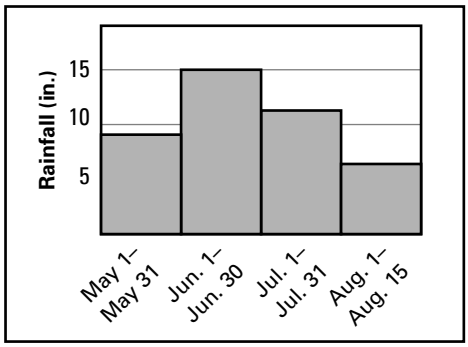
J The vertical axis does not go high enough.

GO ON

Name _____ Date _____

SPI 0806.5.4 (continued)

3 The graph below displays the summer rainfall of a city in a southern U.S. state.



According to the information in the graph, the wettest month is June. Which statement explains why this claim many be inaccurate?

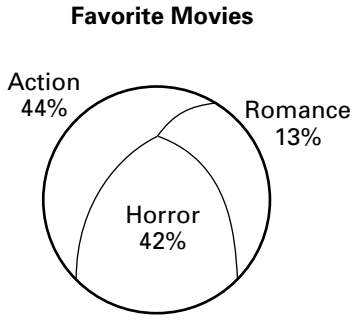
A One bar does not represent a full month.

B The scale for inches of rain does not go high enough.

C The intervals are too large.

D The vertical bars are too narrow.

4 The graph below displays the results of a survey of high school students on their favorite type of movie.



Which statement best explains why a person reading the graph might get an incorrect idea about the students' favorite movie type?

F The percents do not add up to 100%.

G Only three movie types are represented.

H The section for horror movies appears larger than the section for action movies.

J The graph does not show how many students were surveyed.

GO ON

Name _____ Date _____

Post Test

1 A cyclist touring the country traveled 75 miles during a 6 hour day. If he maintains that rate and cycles 6 hours each day, how many days would it take him travel 350 miles?

A $4\frac{2}{3}$ days

B 5 days

C $5\frac{1}{3}$ days

D 6 days

2 A cup contains six blue marbles, two brown marbles, four black marbles, and one red marble. Meka would like to increase the chances of the following events:

- Choosing a marble whose color begins with the letter "b"
- Choosing a marble that is not the only one of its color
- Choosing a marble whose color is more than four letters

Meka decides to remove the red marble from the trunk. Which statement best supports her reasoning?

F The red marble takes up more space in the cup.

G Choosing the red marble is not a favorable outcome.

H There is more than one red marble.

J Choosing the red marble has the greatest probability.

GO ON

Name _____ Date _____

Post Test (continued)

3 Line $\overleftrightarrow{AB}$ passes through $A(-4, 1)$ and $B(9, -6)$. What is the slope of $\overleftrightarrow{AB}$?

A $-\frac{13}{7}$

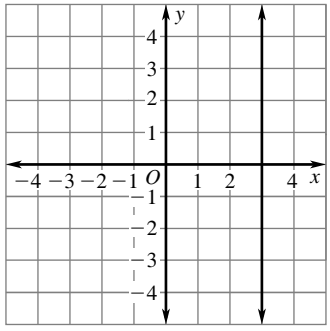
B $-\frac{7}{13}$

C $\frac{7}{13}$

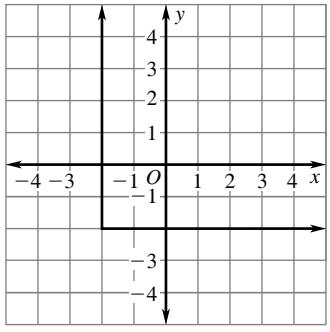
D $\frac{13}{7}$

4 Which graph is a linear function?

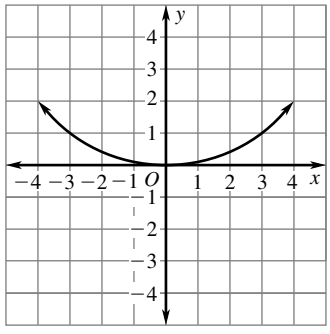
F



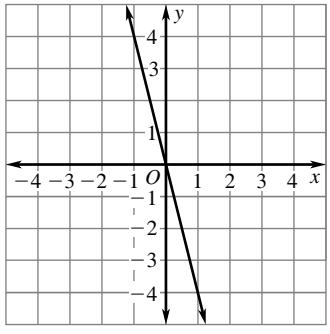
G



H



J



GO ON

Name _____ Date _____

Post Test (continued)

5 The ruby-throated hummingbird is about 4 inches long, or about 6.31×10^{-5} miles. The hummingbird is known for its annual nonstop flight of about 5×10^{2} miles across the Gulf of Mexico. About how many of the hummingbird's body lengths are equal to the distance of its migration?

A 6.6×10^{5}

B 7.92×10^{6}

C 1.056×10^{7}

D 3.168×10^{7}

6 About how kilometers are equivalent to 25 miles? (1 mile ≈ 1.6 kilometers)

F 15.6 kilometers

G 26.6 kilometers

H 40 kilometers

J 400 kilometers

7 Which number is rational?

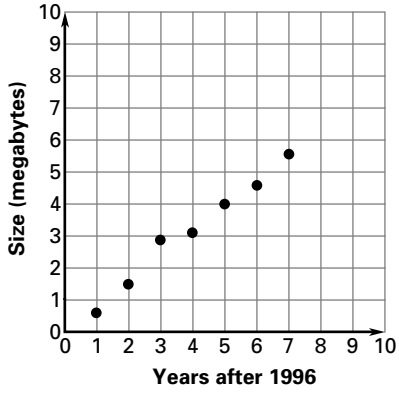
A $\sqrt{8}$

B $\sqrt{9}$

C $\sqrt{88}$

D $\sqrt{99}$

8 The scatterplot below shows the average size, of files downloaded from the Internet.



What do you predict the average downloaded file size was in 2004?

F 6.4 Mb

G 7.1 Mb

H 8 Mb

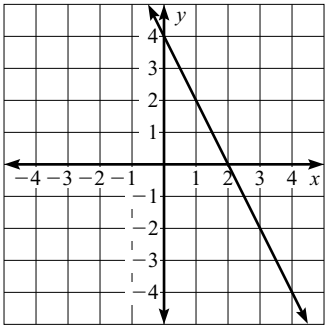
J 8.9 Mb

GO ON

Name _____ Date _____

Post Test (continued)

9 Which of the following functions is represented by the graph below?



A $y = -2x + 4$

B $y = 2x + 4$

C $y = -2x - 4$

D $y = 2x - 4$

10 How many congruent obtuse angles are formed by the intersection of a transversal and two parallel lines if the transversal intersects the lines at an oblique angle?

F none

G 2

H 4

J 8

11 Robert buys a couch. He pays $75 down and $20 per week. Gina buys a bed for $60 down and $23 per week. After how many weeks have Robert and Gina paid the same amount of money?

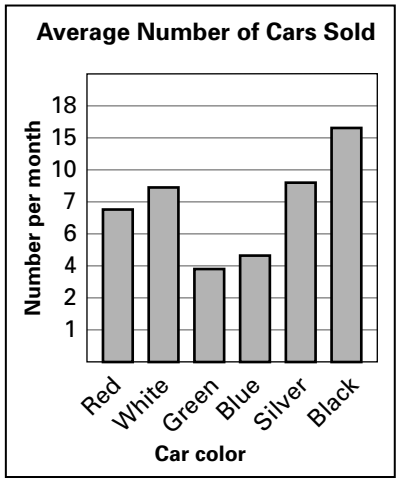
A 3

B 5

C 15

D 18

12 The bar graph below shows the average number of cars of various colors sold by a dealership per month.



Which statement best explains why a person reading the graph might get an incorrect idea about the differences in the sales of cars of each color?

F The title of the graph is misleading.

G Not every possible car color is included.

H The intervals on the vertical scale are not consistent.

J The vertical bars are too narrow.

GO ON

Name _____ Date _____

Post Test (continued)

13 A kitchen store sells four brands of steak knives. Which brand has the least cost per unit?

A The Blade Company
12 knives for $10.80

B Sharpe & Co.
9 knives for $8.20

C NeatNClean
12 knives for $9.60

D Slice of Life
8 knives for $7.20

14 What is the probability of tossing a cube with faces numbered 1–6 and finding the outcome to be a prime number?

F $\frac{1}{2}$

G $\frac{1}{3}$

H $\frac{2}{3}$

J $\frac{5}{6}$

15 Which of the following describes the linear function table below?

x	0	1	2	3	4	5	6
y	3	5	7	9	11	13	15

A add 2 to x to get y

B multiply x by 1, then add 3 to get y

C multiply x by 3, then subtract 1 to get y

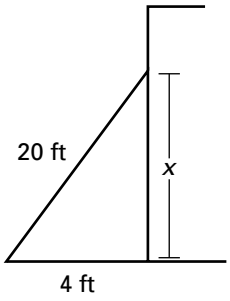
D multiply x by 2, then add 3 to get y

GO ON

Name _____ Date _____

Post Test (continued)

16 The base of a 20-foot ladder is 4 feet from the side of a house. The top of the ladder is leaning against the side of the house.



Which equation can be used to find how high the ladder reaches on the side of the house?

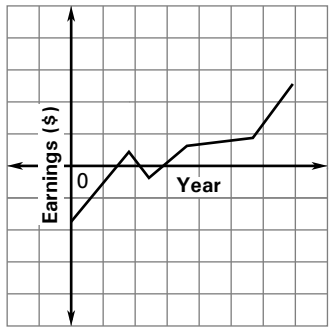
F $x^2 = 20^2 + 4^2$

G $x^2 = 20^2 - 4^2$

H $x^2 = 20^2 \times 4^2$

J $x^2 = 20^2 \div 4^2$

17 The graph below shows the income of the ABC Company during the time it has been in business.



Based on the graph, which best describes the company's income?

A The company has not yet earned a profit.

B The company earned a profit only in its first year.

C The company has always earned at least a small profit.

D The company has earned a profit for about half the time it has been in business.

18 The length of a pencil is 184 millimeters. What is the length in centimeters?

F 1,840 centimeters

G 18.4 centimeters

H 1.84 centimeters

J 0.184 centimeters

GO ON

Name _____ Date _____

Post Test (continued)

19 Simplify $(4.61 \times 10^{-6})(7.2 \times 10^{-2})$.

A -3.3192×10^{8}

B -3.3192×10^{7}

C 3.3192×10^{-8}

D 3.3192×10^{-7}

20 Suppose a letter of the alphabet is chosen at random. What is the probability that the letter is the first letter of your first name?

F $\frac{1}{13}$

G $\frac{1}{25}$

H $\frac{1}{26}$

J $\frac{26}{26}$ or 1

21 Given: $\begin{cases} f(x) = \frac{3x - 4}{2} \\ g(x) = -x + 3 \end{cases}$

If $f(x) = g(x)$, what is the value of x?

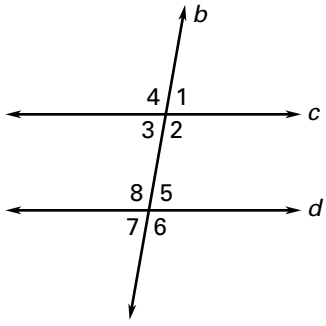
A 1

B $\frac{7}{5}$

C $\frac{7}{4}$

D 2

22 The drawing shows transversal b intersecting parallel lines c and d.



The measure of $\angle 4$ is 100°. What is the measure of $\angle 7$?

F 80°

G 100°

H 110°

J 120°

GO ON

Name _____ Date _____

Post Test (continued)

23 Ms. Foxworthy wrote four irrational numbers on the board and asked Sheldon to choose the number closest to 7. Which irrational number should Sheldon choose?

A $\sqrt{32}$

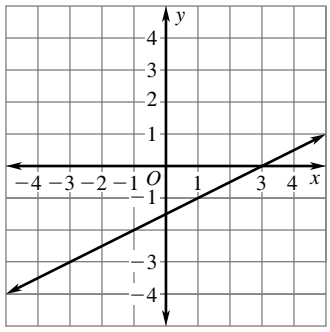
B $\sqrt{35}$

C $\sqrt{41}$

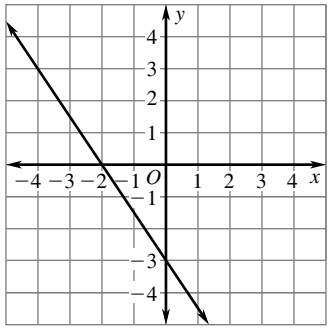
D $\sqrt{47}$

24 Which graph shows a line that appears to have a y-intercept of -3?

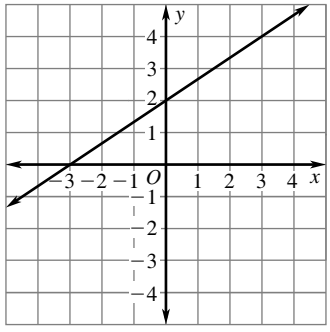
F



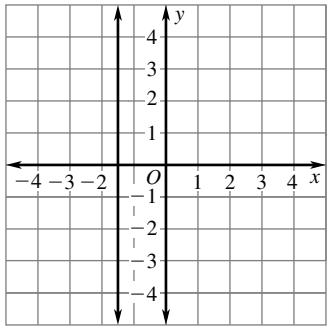
G



H



J



GO ON

Name _____ Date _____

Post Test (continued)

25 A company sells packages of beads to make bracelets. Which package is the best buy?

A $4.85 for 9 bracelets

B $5.27 for 10 bracelets

C $6.12 for 12 bracelets

D $7.80 for 15 bracelets

26 Two cubes with faces labeled 1–6 are tossed at the same time. What is the probability that the sum of the outcomes will be an odd number?

F $\frac{1}{2}$

G $\frac{1}{4}$

H $\frac{17}{36}$

J $\frac{1}{64}$

27 The table represents a linear function. What is the slope of the graph of the function?

x	*y*
3	−2
4	−1
5	0
6	1

A −5

B −1

C 1

D 5

28 The hypotenuse of a right triangle measures 25 centimeters. What are possible measures of the legs of the triangle?

F 7 cm and 24 cm

G 9 cm and 16 cm

H 10 cm and 15 cm

J 12 cm and 13 cm

29 Suppose you travel 370 miles in 6.75 hours. What is your average rate of speed?

A 18.2 miles per hour

B 24.9 miles per hour

C 54.8 miles per hour

D 67.5 miles per hour

GO ON

Name _____ Date _____

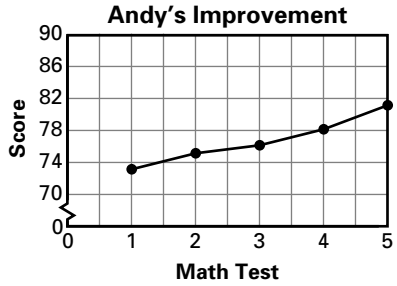
Post Test (continued)

30 Andy began an afterschool program to help improve his math scores. The following table shows his test scores.

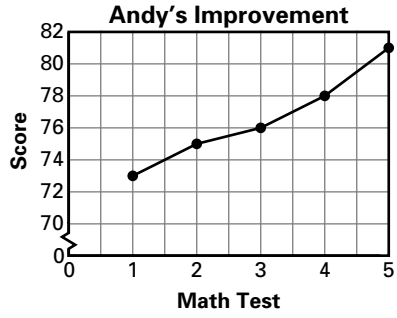
Test	1	2	3	4	5
Score	73	75	76	78	81

The afterschool program wants to make Andy's improvement seem as rapid as possible. Which graph of this data will accomplish this?

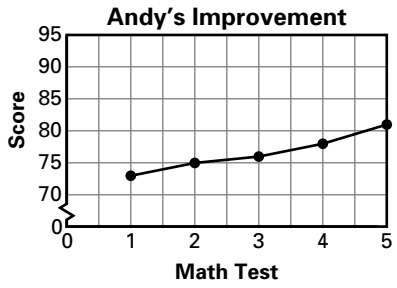
F



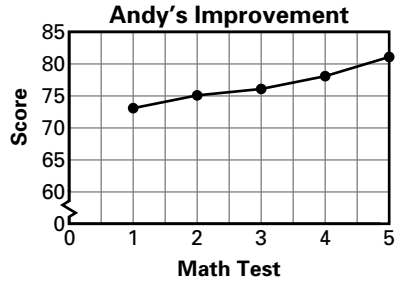
G



H



J



31 Mikayla has $1\frac{1}{2}$ times as many cousins as William has. Together, they have 10 cousins. How many cousins does Mikayla have?

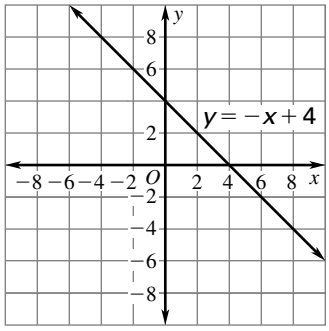
A 4

B 5

C 6

D 15

32 Where does the graph of the function $f(x) = -x + 4$ intercept the y-axis?



F -4

G $-\frac{1}{4}$

H $\frac{1}{4}$

J 4

GO ON

Name _____ Date _____

Post Test (continued)

33 Simplify $\frac{(5.3 \times 10^{-18})}{(6.02 \times 10^{-9})}$.

A -8.8×10^{10}

B -8.8×10^{-10}

C 8.8×10^{-10}

D 8.8×10^{10}

34 A transversal intersects two parallel lines at an oblique angle. The acute angles formed by the intersection measure 64°. What is the measure of the obtuse angles formed by the intersection?

F 26°

G 116°

H 128°

J 296°

35 Dr. Zeit ran a 10-kilometer race last year, in a time of 51 minutes. This year Dr. Zeit would like to run the same race in 0.8 hours. How many kilometers per hour should Dr. Zeit run to complete the race in 0.8 hours? [$D = rt$]

A 12.5 km/h

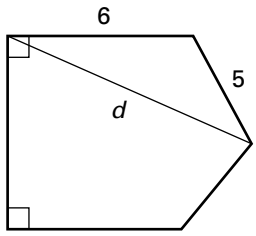
B 14 km/h

C 15.5 km/h

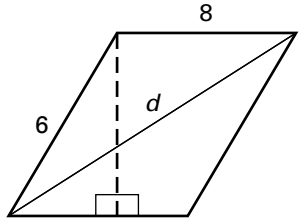
D 17 km/h

36 Line segment d is a diagonal in each polygon shown below. Which drawing shows enough information to find the length of line segment d?

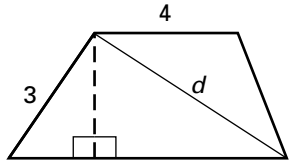
F



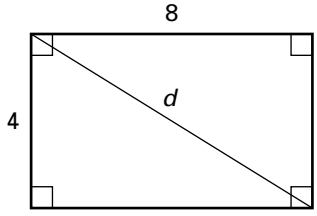
G



H



J



GO ON

Name _____ Date _____

Post Test (continued)

37 The mass of the Earth is about 5.973×10^{24} kilograms and the mass of the Moon is about 7.349×10^{22} kilograms. About how many times greater is the mass of the Earth compared to the mass of the Moon?

A About 8 times greater

B About 10 times greater

C About 80 times greater

D About 100 times greater

38 This chart shows the change that is received from $1.00 if a number of pencils are purchased.

Number of Pencils Purchased	Change
0	$1.00
1	$0.85
2	$0.70
3	$0.55
4	$0.40

Is the graph of the relationship a linear function? Why or why not?

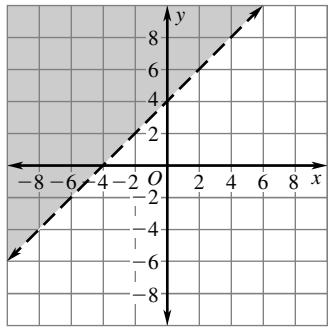
F No, because the origin of the graph is not (0, 0).

G No, because the graph is a line.

H Yes, because it is not possible to purchase more than 6 pencils.

J Yes, because the graph is a line.

39 The graph below shows the solution set of an inequality.



Which inequality does the graph represent?

A $y < x - 4$

B $y > x - 4$

C $y < x + 4$

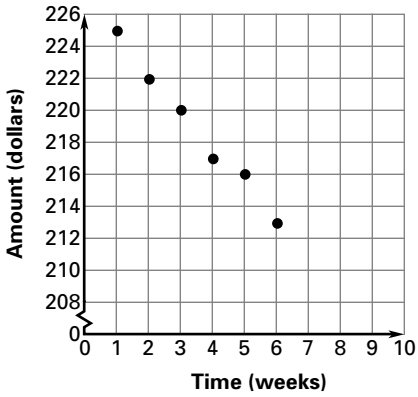
D $y > x + 4$

GO ON

Name _____ Date _____

Post Test (continued)

40 The scatterplot below shows the amounts in Jay's savings account in the weeks after he opened the account.



What do you predict the amount in the account will be 7 weeks after Jay opened it?

F $216

G $214

H $211

J $208

41 Simplify $\frac{(9.6 \times 10^{15})}{(3.2 \times 10^{2})}$.

A 3×10^{13}

B 3×10^{17}

C 6.4×10^{13}

D 6.4×10^{17}

42 On an American football field, the distance between goal posts is 120 yards. What is that distance in feet?

F 40 feet

G 44 feet

H 360 feet

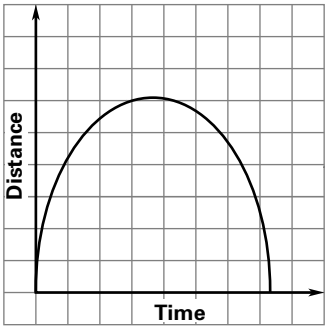
J 4,320 feet

GO ON

Name _____ Date _____

Post Test (continued)

43 The graph below shows time and distance traveled during an airplane's flight between two cities.



Based on the graph, at which point in it's flight does the airplane reach it's greatest rate of speed?

A landing

B takeoff

C halfway through the flight

D three-quarters through the flight

44 The probability of choosing a green marble from a jar is $\frac{7}{20}$. What is the probability of <u>not</u> choosing a green marble from the jar?

F $\frac{12}{20}$

G $\frac{13}{20}$

H $\frac{7}{10}$

J $\frac{14}{20}$

45 A scout troop buys canvas to make drop cloths. The table shows the relationship between the number n of drop cloths the scouts make and the cost c.

Number of Drop Cloths (n)	Cost (c) (in dollars)
1	8
2	16
3	24
4	32

Which equation represents the relationship shown in the table?

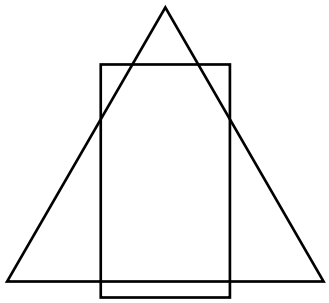
A $c = 8n$

B $n = 8c$

C $c = n + 7$

D $n = c + 7$

46 The intersection of two shapes is shown below.



The intersection of these two shapes is best described as

F exactly 3 points

G exactly 6 line segments

H exactly 7 points

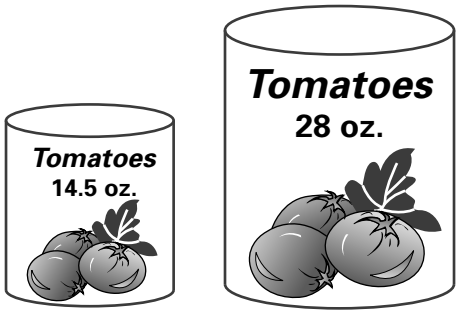
J exactly 19 line segments

GO ON

Name _____ Date _____

Post Test (continued)

47 Mrs. Clough purchased canned tomatoes to make a recipe.



The price of the 14.5-ounce can is $1.99 and the price of a 28-ounce can is $3.59. Mrs. Clough bought a 14.5-ounce can. Which statement about Mrs. Clough's purchase is true based on this information?

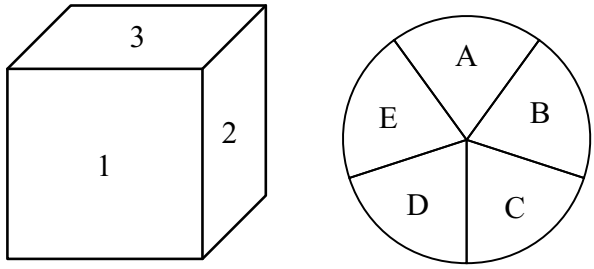
A She made the better buy because $1.99 is less than $3.59.

B She made the better buy because 14.5 ounces is more than twice the size of the large can.

C She did not make the better buy because she needs more than 14.5 ounces of canned tomatoes for her recipe.

D She did not make the better buy because the unit price for the smaller can is about $.14 and the unit price for the larger can is about $.13.

48 The number cube has faces labeled 1 through 6. The spinner has 5 equal sections labeled A through E.



What is the probability that the number cube will land on an even number and the spinner will land on a vowel?

F $\frac{2}{30}$

G $\frac{3}{30}$

H $\frac{4}{30}$

J $\frac{6}{30}$

49 Which number is irrational?

A $\sqrt{100}$

B $\sqrt{200}$

C $\sqrt{400}$

D $\sqrt{900}$

GO ON

Name _____ Date _____

Post Test (continued)

50 About how many centimeters are equivalent to 6 inches? (1 inch ≈ 2.5 centimeters.

F 3.5 centimeters

G 8.5 centimeters

H 13 centimeters

J 15 centimeters

51 Which of these lists of numbers is in order from greatest to least?

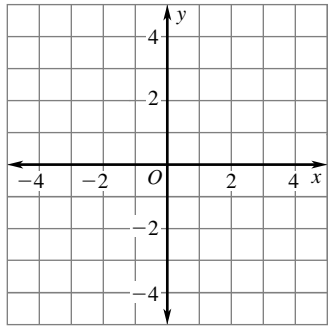
A $2.86, \frac{9}{4}, \sqrt{8.5}, -3$

B $\sqrt{8.5}, 2.86, \frac{9}{4}, -3$

C $-3, \frac{9}{4}, 2.86, \sqrt{8.5}$

D $-3, \sqrt{8.5}, 2.86, \frac{9}{4}$

52 Vertices of a rectangle are shown below.
$J(-4, 2)$ $K(-2, 4)$ $L(2, 0)$ $M(0, -2)$



Suppose rectangle *JKLM* is translated 3 units to the right. How many vertices of the pre-image can be seen in the image?

F none

G 1

H 2

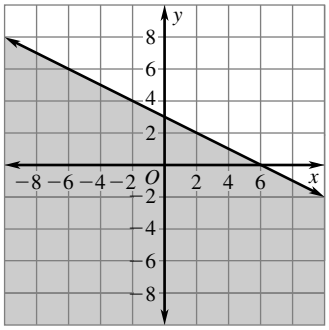
J 4

GO ON

Name _____ Date _____

Post Test (continued)

53 The graph below shows the solution set of an inequality.



Which inequality does the graph represent?

A $y \leq -\frac{1}{2}x + 3$

B $y \leq -\frac{1}{2}x + 6$

C $y \geq -\frac{1}{2}x + 3$

D $y \geq -\frac{1}{2}x + 6$

54 Which equation represents a linear function?

F $-(x^4 + 4) - 7$

G $(x + y)^2 = 1$

H $-x + 3y = 0$

J $x^2 + x + 9 = 0$

55 The irrational number $\sqrt{118}$ is closest to which whole number?

A 10

B 11

C 110

D 120

GO ON

Name _____ Date _____

Post Test (continued)

56 Which statement about linear and nonlinear functions is *always* true?

F In the coordinate plane, a line parallel to the x-axis is a nonlinear function.

G The graph of a linear function is a curve.

H The y-axis of the coordinate plane is an example of a graph of a linear function.

J In the coordinate plane, the graph of a linear function is a straight line that is not parallel to the y-axis.

57 Which number is irrational?

A $\frac{\pi^3}{\pi^2}$

B $\frac{7\pi}{5\pi}$

C $\frac{5+\pi}{\pi+5}$

D $\frac{3\pi-8\pi}{\pi}$

58 Which ordered pair is a solution of the equation $x - y = 6$?

F $(3, 3)$

G $(-3, 3)$

H $(3, -3)$

J $(-3, -3)$

59 What is the solution to this system of linear equations?

$$-3x + 4y = 12$$
$$3x - 2y = -4$$

A $\left(-3, -\frac{5}{2}\right)$

B $\left(-\frac{5}{2}, -3\right)$

C $\left(\frac{4}{3}, 4\right)$

D $\left(4, \frac{4}{3}\right)$

GO ON

Name _____ Date _____

Post Test (continued)

60 Three nickels are tossed at the same time. What is the probability that the outcomes of all three coins are identical?

F $\frac{1}{3}$

G $\frac{1}{4}$

H $\frac{1}{8}$

J $\frac{3}{2}$

61 Given: $\begin{cases} f(x) = \frac{4x}{9} \\ g(x) = 2x + 1 \end{cases}$

If $f(x) = g(x)$, what is the value of x?

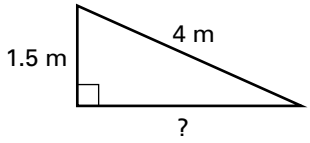
A $-\frac{1}{2}$

B $-\frac{9}{14}$

C $\frac{9}{2}$

D 4

62 A roof truss in a new home is in the shape of a right triangle with a hypotenuse that is 4 meters long and one leg that is 1.5 meters long.



Which is closest to the length of the other leg?

F 2.5 m

G 3.7 m

H 4.3 m

J 5.5 m

GO ON

Name _____ Date _____

Post Test (continued)

63 What is the solution to this system of linear equations?

$$2a + b = -23$$
$$-3a + b = 12$$

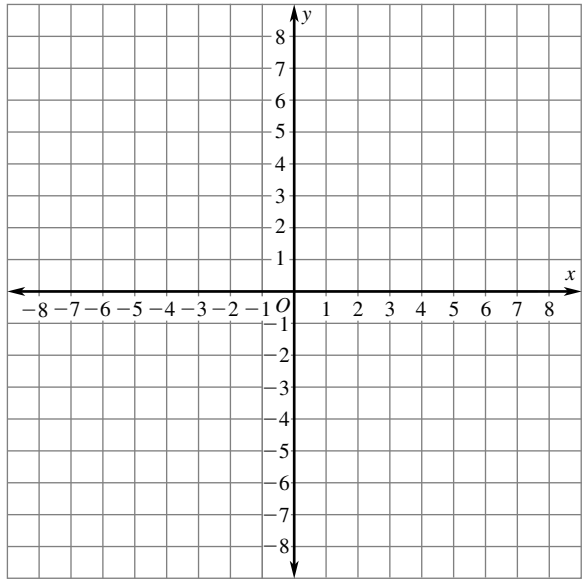
A $(-10, -3)$

B $(-7, -9)$

C $(-6, -11)$

D $(1, 14)$

64 A right triangle in the coordinate plane has vertices at $(5, 6)$, $(-7, -4)$, and $(5, -4)$. To the nearest tenth, what is the length of the hypotenuse?



F 14.1 units

G 14.9 units

H 15.6 units

J 16.4 units

GO ON

Name _____ Date _____

Pre Test Fill in the correct answer.

1. Ⓐ Ⓑ Ⓒ Ⓓ
2. Ⓕ Ⓖ Ⓗ Ⓙ
3. Ⓐ Ⓑ Ⓒ Ⓓ
4. Ⓕ Ⓖ Ⓗ Ⓙ
5. Ⓐ Ⓑ Ⓒ Ⓓ
6. Ⓕ Ⓖ Ⓗ Ⓙ
7. Ⓐ Ⓑ Ⓒ Ⓓ
8. Ⓕ Ⓖ Ⓗ Ⓙ
9. Ⓐ Ⓑ Ⓒ Ⓓ
10. Ⓕ Ⓖ Ⓗ Ⓙ
11. Ⓐ Ⓑ Ⓒ Ⓓ
12. Ⓕ Ⓖ Ⓗ Ⓙ
13. Ⓐ Ⓑ Ⓒ Ⓓ
14. Ⓕ Ⓖ Ⓗ Ⓙ
15. Ⓐ Ⓑ Ⓒ Ⓓ
16. Ⓕ Ⓖ Ⓗ Ⓙ
17. Ⓐ Ⓑ Ⓒ Ⓓ
18. Ⓕ Ⓖ Ⓗ Ⓙ
19. Ⓐ Ⓑ Ⓒ Ⓓ
20. Ⓕ Ⓖ Ⓗ Ⓙ
21. Ⓐ Ⓑ Ⓒ Ⓓ
22. Ⓕ Ⓖ Ⓗ Ⓙ
23. Ⓐ Ⓑ Ⓒ Ⓓ
24. Ⓕ Ⓖ Ⓗ Ⓙ
25. Ⓐ Ⓑ Ⓒ Ⓓ
26. Ⓕ Ⓖ Ⓗ Ⓙ
27. Ⓐ Ⓑ Ⓒ Ⓓ
28. Ⓕ Ⓖ Ⓗ Ⓙ
29. Ⓐ Ⓑ Ⓒ Ⓓ
30. Ⓕ Ⓖ Ⓗ Ⓙ
31. Ⓐ Ⓑ Ⓒ Ⓓ
32. Ⓕ Ⓖ Ⓗ Ⓙ
33. Ⓐ Ⓑ Ⓒ Ⓓ
34. Ⓕ Ⓖ Ⓗ Ⓙ
35. Ⓐ Ⓑ Ⓒ Ⓓ
36. Ⓕ Ⓖ Ⓗ Ⓙ
37. Ⓐ Ⓑ Ⓒ Ⓓ
38. Ⓕ Ⓖ Ⓗ Ⓙ
39. Ⓐ Ⓑ Ⓒ Ⓓ
40. Ⓕ Ⓖ Ⓗ Ⓙ
41. Ⓐ Ⓑ Ⓒ Ⓓ
42. Ⓕ Ⓖ Ⓗ Ⓙ
43. Ⓐ Ⓑ Ⓒ Ⓓ
44. Ⓕ Ⓖ Ⓗ Ⓙ
45. Ⓐ Ⓑ Ⓒ Ⓓ
46. Ⓕ Ⓖ Ⓗ Ⓙ
47. Ⓐ Ⓑ Ⓒ Ⓓ
48. Ⓕ Ⓖ Ⓗ Ⓙ
49. Ⓐ Ⓑ Ⓒ Ⓓ
50. Ⓕ Ⓖ Ⓗ Ⓙ
51. Ⓐ Ⓑ Ⓒ Ⓓ
52. Ⓕ Ⓖ Ⓗ Ⓙ
53. Ⓐ Ⓑ Ⓒ Ⓓ
54. Ⓕ Ⓖ Ⓗ Ⓙ
55. Ⓐ Ⓑ Ⓒ Ⓓ
56. Ⓕ Ⓖ Ⓗ Ⓙ
57. Ⓐ Ⓑ Ⓒ Ⓓ
58. Ⓕ Ⓖ Ⓗ Ⓙ
59. Ⓐ Ⓑ Ⓒ Ⓓ
60. Ⓕ Ⓖ Ⓗ Ⓙ
61. Ⓐ Ⓑ Ⓒ Ⓓ
62. Ⓕ Ⓖ Ⓗ Ⓙ
63. Ⓐ Ⓑ Ⓒ Ⓓ
64. Ⓕ Ⓖ Ⓗ Ⓙ

Name _____ Date _____

Post Test Fill in the correct answer.

1. Ⓐ Ⓑ Ⓒ Ⓓ
2. Ⓕ Ⓖ Ⓗ Ⓙ
3. Ⓐ Ⓑ Ⓒ Ⓓ
4. Ⓕ Ⓖ Ⓗ Ⓙ
5. Ⓐ Ⓑ Ⓒ Ⓓ
6. Ⓕ Ⓖ Ⓗ Ⓙ
7. Ⓐ Ⓑ Ⓒ Ⓓ
8. Ⓕ Ⓖ Ⓗ Ⓙ
9. Ⓐ Ⓑ Ⓒ Ⓓ
10. Ⓕ Ⓖ Ⓗ Ⓙ
11. Ⓐ Ⓑ Ⓒ Ⓓ
12. Ⓕ Ⓖ Ⓗ Ⓙ
13. Ⓐ Ⓑ Ⓒ Ⓓ
14. Ⓕ Ⓖ Ⓗ Ⓙ
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