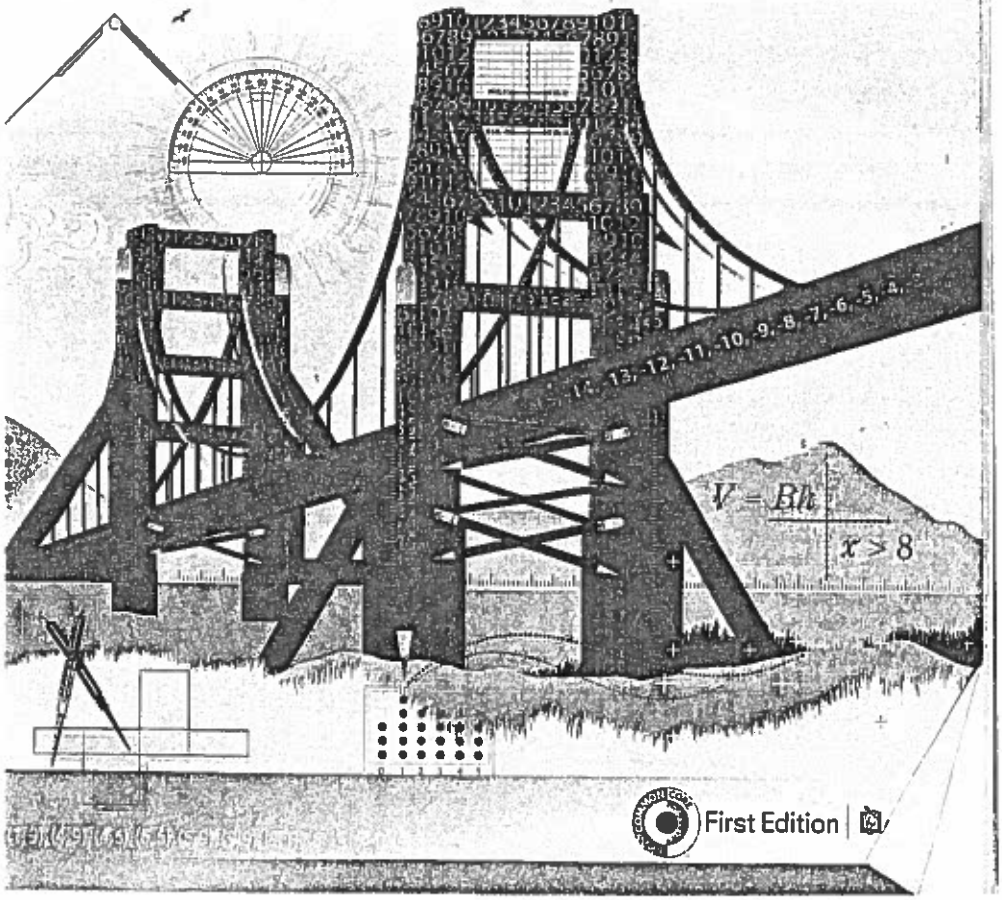
GEORGIA

triumphlearning

Common Core Coach

Mathematics 6

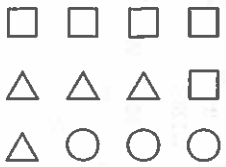
Assessments



First Edition

Domain Reviews

1. Carissa drew the figures below on a sheet of paper.



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

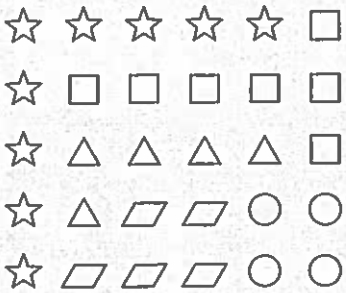
A. The ratio of circles to all figures is 3 to 9.

B. The ratio of triangles to squares is 4 to 5.

C. The ratio of squares to circles is 5 to 3.

D. The ratio of all figures to squares is 12 to 5.

2. Joaquin created the figures below using design software on his computer.



What is the ratio of quadrilaterals to all figures?

A. 2:3

B. 2:5

C. 3:5

D. 5:2

Go On ▶

3. A recipe for a mixed berry pie calls for 5 ounces of blackberries for every 9 ounces of raspberries. Which of the following statements is true?

A. The recipe calls for $\frac{5}{14}$ ounce of blackberries for every ounce of raspberries.

B. The recipe calls for $\frac{14}{5}$ ounce of blackberries for every ounce of raspberries.

C. The recipe calls for $\frac{5}{9}$ ounce of blackberries for every ounce of raspberries.

D. The recipe calls for $\frac{9}{5}$ ounce of blackberries for every ounce of raspberries.

4. Tito went to a concert given by a jazz band. The band had 5 saxophone players and 4 trumpet players. What was the ratio of trumpet players to saxophone players in the band?

A. 4:9

B. 4:5

C. 5:4

D. 5:9

5. Peter and Randy run a refreshments stand at a minor league baseball park. The ratio of cups of lemon juice to cups of water in their lemonade is 2:10. Which unit rate best describes how Peter and Randy make their lemonade?

A. $\frac{1}{4}$ cup of water for every cup of lemon juice

B. $\frac{1}{5}$ cup of water for every cup of lemon juice

C. $\frac{1}{4}$ cup of lemon juice for every cup of water

D. $\frac{1}{5}$ cup of lemon juice for every cup of water

6. Mariluz will be spending her vacation at her uncle's house in the mountains. She drove the 582 kilometers from her home to her uncle's house in 6 hours. At what rate did Mariluz complete her trip?

A. 0.01 kilometer per hour

B. 79 kilometers per hour

C. 97 kilometers per hour

D. 100 kilometers per hour

Go On ▶

7. Jackson analyzes polling results for elections across the country. Over the last 10 years, Jackson has correctly predicted the winner of an election 78% of the time. Which of the following statements best describes Jackson's results?

A. For every 100 elections, Jackson has predicted the winner 78 times.

B. For every 1,000 elections, Jackson has predicted the winner 78 times.

C. Jackson predicted the winner of 78 of the last 100 elections.

D. Jackson predicted the winner of the last 78 elections.

8. Yukiko plays on the softball team at her school. The team won 9 of its first 12 games. At that rate, how many games will Yukiko's team win if it plays 64 games in all?

A. 45

B. 48

C. 50

D. 58

9. Miles rode his mountain bike over some trails in a state park. He biked a total of $5\frac{1}{2}$ miles. How many yards did Miles bike? There are 1,760 yards in a mile.

A. 320 yd

B. 8,800 yd

C. 9,680 yd

D. 29,040 yd

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

A. It would cost $0.20 to buy 8 ounces of granola at the market.

B. It would cost $13.60 to buy 12 ounces of granola at the market.

C. It would cost $16.16 to buy 16 ounces of granola at the market.

D. It would cost $38.40 to buy 24 ounces of granola at the market.

Go On ▶

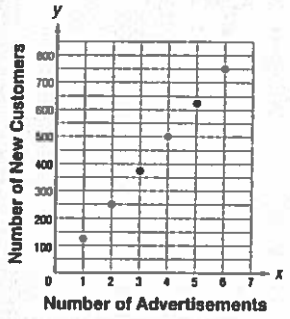
11. Mr. Zheng owns a store that sells computers and other electronics. He has noticed that the number of times he places an advertisement in the local paper announcing a sale affects how many new customers he gets. The table below shows data that Mr. Zheng collected on the relationship.

Effect of Advertisements

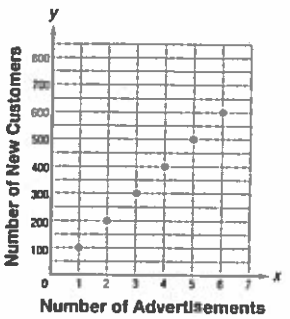
Number of Advertisements	1	2	3	4	5	6
Number of New Customers	125	250	375	500	625	750

Which graph reflects Mr. Zheng's data?

A.



C.



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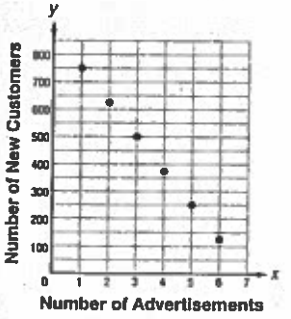
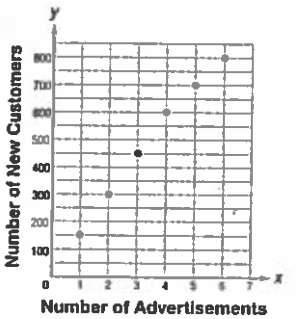


D.



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

Lumber Needed

Number of Decks	Lumber (in sq ft)
2	1,052
3	1,578
4	2,104
5	2,630
6	3,156
7	?

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

A. 3,682 square feet

B. 3,718 square feet

C. 4,208 square feet

D. 6,312 square feet

13. An adult male giraffe can have a mass of as much as 1,360 kilograms. What is 1,360 kilograms in grams?

A. 1.36 g

B. 136 g

C. 13,600 g

D. 1,360,000 g

Go On ▶

14. During the last school year, the students at Hayes High School and McGovern High School organized volunteers to clean up two city parks and collect recyclable items. The tables below show the average number of kilograms of recyclables collected for different numbers of volunteers for each high school.

Hayes High School

Number of Volunteers	Recyclables Collected (in kg)
3	30.15
4	40.20
5	50.25
6	60.30
7	70.35

McGovern High School

Number of Volunteers	Recyclables Collected (in kg)
3	26.55
4	35.40
5	44.25
6	53.10
7	61.95

Based on the data in the tables, which of the following statements is true?

A. On average, the volunteers from Hayes High School collected 2.1 more kilograms of recyclables per person than the volunteers from McGovern High School.

B. On average, the volunteers from McGovern High School collected 2.1 more kilograms of recyclables per person than the volunteers from Hayes High School.

C. On average, the volunteers from Hayes High School collected 1.2 more kilograms of recyclables per person than the volunteers from McGovern High School.

D. On average, the volunteers from McGovern High School collected 1.2 more kilograms of recyclables per person than the volunteers from Hayes High School.

Go On ▶

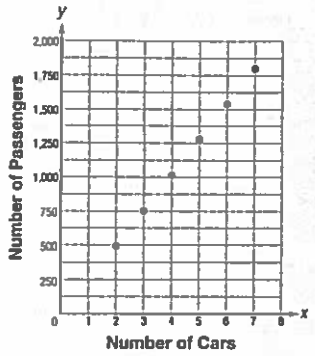
15. The table below shows the maximum capacities, including standing room, for different numbers of New York City subway cars.

Capacities of Subway Cars

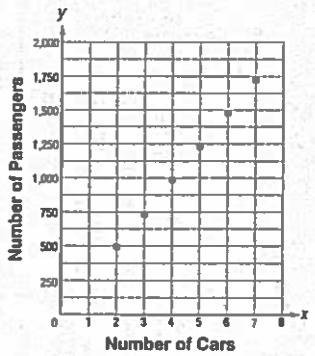
Number of Cars	2	3	4	5	6	7
Number of Passengers	492	738	984	1,230	1,476	?

Which of the graphs below best reflects the data in the table and shows the capacity of 7 subway cars?

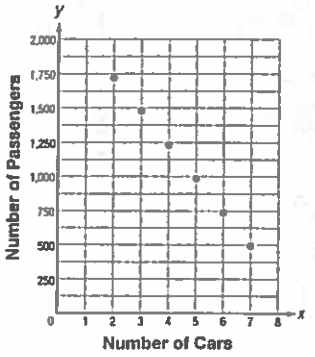
A.



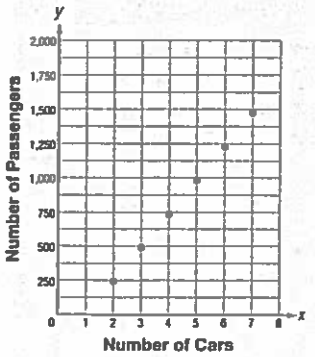
C.



B.



D.



Go On ▶

16. Felipe makes salads at a restaurant. On average, Felipe can make 12 salads in 20 minutes. At that rate, how many salads could Felipe make in 45 minutes?

A. 27

B. 30

C. 56

D. 75

17. A carabiner is a key piece of equipment for a mountain climber. Kneisl's Mountain Adventures store is having a sale on carabiners. During the sale, you can buy 4 carabiners for $29.60. What is the unit price of the carabiners?

A. $7.15

B. $7.40

C. $8.15

D. $118.40

18. At the local greenmarket, Debra bought 5 ounces of Chinese long beans for $13.55. At that rate, how much would she pay for 8 ounces of Chinese long beans?

A. $20.08

B. $20.88

C. $21.68

D. $22.48

19. What is 45% of 120?

A. 5.4

B. 6.6

C. 54

D. 66

20. As part of a science project, Liam grew two pumpkins in his backyard. Pumpkin A weighs $14\frac{1}{2}$ pounds and Pumpkin B weighs 248 ounces. Which of the following statements is true of the pumpkins? (1 lb = 16 oz)

A. Pumpkin A weighs 16 ounces less than Pumpkin B.

B. Pumpkin B weighs 16 ounces less than Pumpkin A.

C. Pumpkin A weighs 24 ounces more than Pumpkin B.

D. Pumpkin B weighs 24 ounces more than Pumpkin A.

Go On ▶

21. The students at Emily's school recently raised money to help the victims of a natural disaster in Asia. Emily's sixth-grade class raised 40% of the total amount raised by the school. If Emily's class raised $580, how much money did the school raise in all? Explain how you found your answer.

22. A recipe for a salad dressing calls for fresh lime juice and honey. The ratio of tablespoons of honey to tablespoons of lime juice is 8:16. According to the recipe, how many tablespoons of honey are needed for every tablespoon of lime juice? Write your answer as a fraction in simplest form. Explain how you found your answer.

Go On ▶

Duplicating any part of this book is prohibited by law.

23. The losing candidate in a mayoral election received 10,200 votes, which represented 30% of all votes cast in the election.

A. Dorian claims that the total number of votes cast in the mayoral election was 3,060. Dorian made a mistake in his calculations. Why is his claim **not** reasonable? Explain your answer.

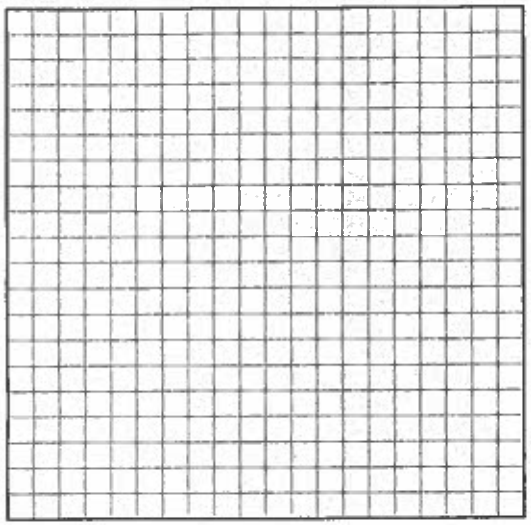
B. Find the total number of votes cast in the mayoral election. Explain how you found your answer.

Go On ▶

24. A ferry company runs ferries from Maine to Prince Edward Island, Canada. The table below shows the maximum vehicle capacities for different numbers of ferries.

Number of Ferries	2	3	4	5	6
Number of Vehicles	500	750	1,000	1,250	?

A. Use the grid below to graph the values in the table. Find the maximum vehicle capacity for 6 ferries and plot that point.



B. The unit rate in this situation is the maximum vehicle capacity per ferry. What is the unit rate? Explain your answer.

Go On ▶

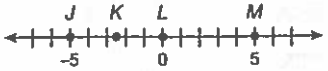
25. At a local farmer's market, Jodi bought 3 pounds of Ashmead's Kernel apples for $4.47 at the McDougal Orchards stand.

A. At that rate, how much would it cost Jodi to buy 5 pounds of Ashmead's Kernel apples? Show your work.

B. Brannen's Orchards also sells apples at the farmers' market. At that stand, you can buy 4 pounds of Ashmead's Kernel apples for $6.12. At which stand are Ashmead's Kernel apples a better buy: McDougal Orchards or Brannen's Orchards? Explain your answer.

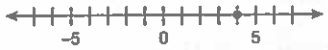
STOP

1. Which point shows the opposite of −5?



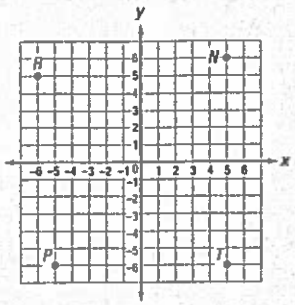
A. point *J*
B. point *K*
C. point *L*
D. point *M*

2. Where is 4 located on the number line?



A. between −3 and 0
B. between −2 and 1
C. between 2 and 3
D. between 3 and 5

3. Which point is located at (−5, −6)?



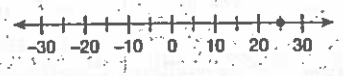
A. point *N*
B. point *P*
C. point *R*
D. point *T*

4. Noor has 4 cups of hot chocolate in his thermos. He offers $\frac{5}{8}$-cup servings of hot chocolate to some friends. What is the greatest number of friends Noor can offer hot chocolate to?

A. 4
B. 5
C. 6
D. 7

Go On ▶

5. What is the absolute value of the number represented by the point on this number line?



A. −25
B. 0
C. 5
D. 25

6. Nisha is following a recipe for tomato sauce that calls for $1\frac{3}{4}$ teaspoons of oregano. She is using a measuring spoon that holds $\frac{1}{8}$ teaspoon. How many times will she need to fill the measuring spoon with oregano to make the tomato sauce?

A. 11
B. 12
C. 13
D. 14

7. The number line shows the opposite of −4.

What is the opposite of the integer plotted on the number line?

A. −4
B. −2
C. 2
D. 4

8. Find the quotient: 1,203 ÷ 3

A. 301
B. 400
C. 401
D. 4,010

9. Which of the following statements is **not** true?

A. −11 is the opposite of 11.
B. 0 is the opposite of 0.
C. 5.3 is the opposite of 3.5.
D. 21 is the opposite of −21.

Go On ▶

10. Andie is taking a sewing class. Her first assignment is to stitch together 49 identical fabric rectangles from end to end to create a long banner. If each rectangle measures 8.3 centimeters long, what will be the length of the completed banner?

A. 334.7 cm

B. 406.7 cm

C. 467 cm

D. 539 cm

11. Dora earns an annual salary of $85,608. How much does she earn every month?

A. $6,144

B. $7,134

C. $7,144

D. $7,234

12. Hassan ran 3 miles in 18.342 minutes. Safaya ran the same distance in 19.291 minutes. How much longer did it take Safaya to run 3 miles than Hassan?

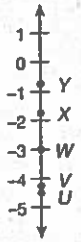
A. 0.939 min

B. 0.949 min

C. 0.959 min

D. 1.051 min

13. Scientists noticed a sudden spike in algae production along the coast. To monitor the algae activity, experts measured the depth in meters of the largest algae colony from the surface of the water every day for five days. The number line below shows the depths they recorded.



On the sixth day, experts measured −2.24 meters. Between which two points would this measurement fall on the number line?

A. between points *U* and *V*

B. between points *V* and *W*

C. between points *W* and *X*

D. between points *X* and *Y*

14. On the coldest night last winter, the temperature in Julia's hometown was −12°F. How many degrees Fahrenheit below 0 was the temperature?

A. −21 degrees because −21°F is below 0°F.

B. 0 degrees because 12 − 12 = 0.

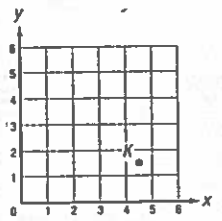
C. 12 degrees because $|-12| = 12$.

D. 24 degrees because 12 + 12 = 24.

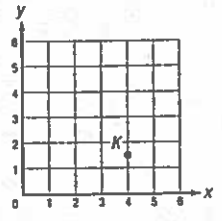
Go On ▶

15. Which graph shows point *K* at (4.5, 1.5)?

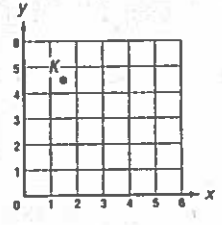
A.



B.



C.



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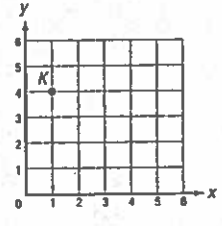


16. Nisha is putting 64 cookies and 40 chocolate truffles into gift boxes. Each box will have the same number of cookies and chocolate truffles. What is the greatest number of boxes Nisha can make with no cookies or chocolate truffles left over?

A. 6

B. 7

C. 8

D. 9

17. Oliver climbed 222 meters of a steep mountain to reach the summit. He then rappelled down the other side of the mountain to return to the base. Which integer best represents Oliver's descent?

A. −444

B. −222

C. 0

D. 222

Go On ▶

18. Mack is working on his science project. He dropped a ball filled with sand from the balcony of a building 42 feet from the ground. Which of the following statements is true?

A. Mack's ball traveled a distance of 42 feet because $|-42|$ is 42.

B. Mack's ball traveled a distance of -42 feet because $|-42|$ is -42.

C. Mack's ball traveled a distance of 0 feet because $|0|$ is 0 and the ball ended at ground level.

D. Mack's ball traveled a distance of 24 feet because $|-42|$ is 24.

19. Serena wants to buy reusable bamboo plates and cups for a barbecue. Plates are sold in packages of 8. Cups are sold in packages of 12. What is the least number of packages Serena can buy to have an equal number of plates and cups?

A. 3 packages of plates, 2 packages of cups

B. 3 packages of plates, 4 packages of cups

C. 4 packages of plates, 2 packages of cups

D. 4 packages of plates, 3 packages of cups

20. The Rotolo family is planning a winter vacation. They are considering two ski resorts. Their travel guidebook states that the bigger of the two resorts has an average temperature of $-4°F$. The smaller resort reports an average of $-17°F$. Which of the following correctly compares the average temperatures at the resorts?

A. $-17°F > -4°F$

B. $-17°F < -4°F$

C. $-17°F > 4°F$

D. $4°F < -17°F$

21. Duke and Hilda went scuba diving to study migrating fish 41 feet beneath the ocean's surface. They returned to the surface after 15 minutes. Which integer best describes their location when they surfaced?

A. -41 because they dove 41 feet below sea level.

B. 0 because 0 feet represents sea level and their starting point.

C. 41 because that's how far they swam back up after their dive to return to the surface.

D. 82 because they dove 41 feet and then swam back up 41 feet.

Go On ▶

22. Beatrice earned $20 mulching a neighbor's yard. That night, Beatrice ordered pizza for dinner. Including tip, she gave the delivery man $20. Which equation best describes the day's events?

A. $-\$20 - \$20 = -\$40$

B. $0 + \$20 = \$20$

C. $0 - \$20 = -\$20$

D. $\$20 - \$20 = 0$

23. Gillian plotted $(-3, 8)$ on a coordinate plane. Which quadrant is that point located in?

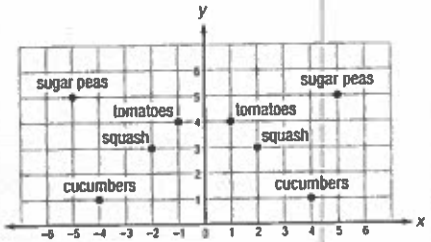
A. Quadrant I

B. Quadrant II

C. Quadrant III

D. Quadrant IV

24. Julio's and his neighbor Ralph's vegetable gardens are mirror images of each other. The diagram below shows their gardens and shared fence.



Julio's Garden Ralph's Garden

Which of the following statements is true?

A. The location of Julio's squash plant at $(-2, 3)$ is like a reflection over the fence of the location of Ralph's squash plant at $(2, 3)$.

B. The location of Ralph's sugar peas is like a reflection over the fence of where Julio's squash are planted.

C. The location of Julio's tomatoes is $(-4, 1)$.

D. Ralph's cucumbers are located at $(4, -1)$.

25. Which of the following is equivalent to $48 + 18$?

A. $4(6 + 3)$

B. $6(6 + 3)$

C. $6(8 + 3)$

D. $8(6 + 3)$

Go On ▶

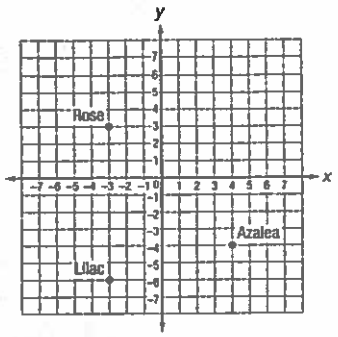
26. Paul, Raul, and Saul had a competition to see who could pick the greatest amount of strawberries in three minutes. Paul picked $1\frac{5}{8}$ pounds of strawberries, Raul $1\frac{3}{4}$ pounds, and Saul $1\frac{11}{16}$ pounds. Who came in second? Show your work.

27. Chaz is a college student. He has a checking account balance of −$52.00. His roommate Will's checking account balance is −$59.25. Chaz thinks that Will owes more to the bank than Chaz does. Is Chaz correct? Explain your answer.

Go On ▶

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

Client's Backyard



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

B. The length of each square on the map represents one foot in the garden. How far apart has the designer placed the hydrangea and azalea plants? Explain how you can use absolute value to find the answer.

Go On ▶

29. Amina tested the temperature of a chemical in her science lab every hour for five hours. She recorded the following temperatures in degrees Celsius.

4.4, −5.9, −2, 3.1, −7.6

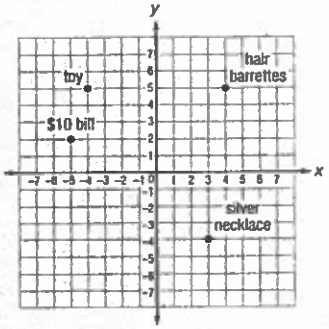
A. In the space below, draw a number line and plot the data points. Then use comparative symbols to order the temperatures from coldest to warmest.

B. Explain the position of −2°C in relation to −7.6°C on the number line and what this means.

Go On ▶

30. Ms. Riches set up a treasure hunt for her nieces. The map below shows the location of four treasures.

Treasure Hunt Map



A. Ms. Riches wants to add a fifth treasure, a pair of movie tickets, at (2, −5). Plot and label this point on the map.

B. The length of each square on the map represents one foot. What is the distance between the hair barrettes and the toy? Explain how you can use absolute value to find the answer.

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STOP

1. Which verbal expression represents the algebraic expression $3(5 + 3)$?

   A. 5 plus 3 times 3

   B. 3 times 5 plus 3

   C. 3 times the sum of 5 and 3

   D. the product of 5 and 3

2. Which is equivalent to $3 \times 3 \times 3 \times 3 \times 3$?

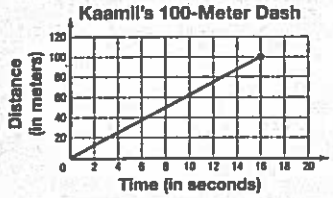
   A. 3×5

   B. 3^3

   C. 5^3

   D. 3^5

3. Kaamil competed in the 100-meter dash at a track meet. The graph below shows the time it took her to run that distance.



   What are the dependent and independent variables in the graph?

   A. Time is the independent variable; distance is the dependent variable.

   B. Time is the dependent variable; distance is the independent variable.

   C. Time and distance are both independent variables.

   D. Time and distance are both dependent variables.

4. Catya had $70 saved. She received some more money as a graduation gift. Now she has $150. Which equation could be used to determine how much money Catya received on her graduation?

   A. $70 + 150 = g$

   B. $70 + g = 150$

   C. $150 + g = 70$

   D. $g - 70 = 150$

Go On ▶

5. Which is equivalent to 6^3?

   A. 6×3

   B. $3 \times 3 \times 3$

   C. $6 \times 6 \times 6$

   D. $3 \times 3 \times 3 \times 3 \times 3 \times 3$

6. Which is equivalent to y^5?

   A. $5y$

   B. $y + 5$

   C. $y \times y \times y \times y \times y$

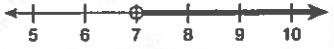
   D. $y + y + y + y + y$

7. Which number line represents the inequality $x > 7$?

   A.


   B.


   C.


   D.


8. Which algebraic expression represents the verbal expression "7 decreased by m"?

   A. $m - 7$

   B. $7m$

   C. $7 - m$

   D. $7 + m$

9. Which verbal expression represents the algebraic expression $3y$?

   A. 3 increased by y

   B. the product of 3 and y

   C. y to the third power

   D. the quotient of 3 and y

10. Akiva's birthday party will be in a room at the community center. The room can hold 75 people. He wants to use tables that seat 5 people each. Which inequality can be used to find the maximum number of tables, t, that Akiva can use?

    A. $5 + t \geq 75$

    B. $5 + t \leq 75$

    C. $5t \geq 75$

    D. $5t \leq 75$

11. Which expression is equivalent to $b + b + b + b$?

    A. $4b$

    B. $4 + b$

    C. b^4

    D. $4(b + b)$

Go On ▶

12. Reina scored twice as many goals at her last field hockey game as she did during the first game of the season. If f represents the number of goals Reina scored during the first game, which expression represents the number of goals she scored during the last game?

A. $2f$

B. $2 - f$

C. $2 + f$

D. $2 \div f$

13. Evaluate $6 \div 3 \times 2a$ for $a = 2$.

A. 0.5

B. 2

C. 8

D. 8.5

14. The formula for the volume of a cube is $V = s^3$. What is the volume of a cube with a side length, s, of 3 feet?

A. 3 cubic feet

B. 9 cubic feet

C. 21 cubic feet

D. 27 cubic feet

15. Which expression is equivalent to $15x - 6$?

A. $3(5x - 2)$

B. $3(5x - 6)$

C. $5(3x - 6)$

D. $6(9x - 1)$

16. Which pair of expressions are equivalent?

A. $20p - 18$ and $2(10p - 16)$

B. $g + g + g$ and g^3

C. $3z + 26$ and $3z + 62$

D. $8(2r + 3)$ and $16r + 24$

17. Which value of x makes the equation $3x + 5 = 4x + 3$ true?

A. $x = 2$

B. $x = 3$

C. $x = 4$

D. $x = 5$

18. Carrie has 11 board games. This is 8 more board games than Marisol has. The equation $11 = m + 8$ can be used to find the number of board games that Marisol has. How many board games does Marisol have?

A. 3

B. 5

C. 19

D. 88

Go On ▶

19. Solve for j: $j - 9.2 = 22.5$

A. $j = 13.3$

B. $j = 31.7$

C. $j = 114.5$

D. $j = 207$

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20. Which value of x makes the inequality $\frac{1}{2}x \geq 7$ true?

A. $x = 8$

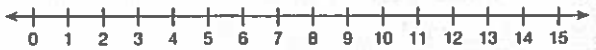
B. $x = 10$

C. $x = 12$

D. $x = 14$

Go On ▶

21. Scott is collecting cans for his school's annual food drive. He has already collected 3 cans but wants to collect at least 12 cans in all. Write and solve an inequality to show how many more cans Scott needs to collect to reach his goal. Graph the solution on the number line below.



22. The table shows the relationship between the number of smoothies, n, and the total cost in dollars of the smoothies, c, at Juicy's Smoothies.

Juicy's Smoothies

n	c
1	2
2	4
3	6
4	8
5	10

Write an equation to model the relationship between the cost and the number of smoothies. Which variable is the independent variable? Which variable is the dependent variable?

Go On ▶

23. Alejandro saved some money for his trip to a water park. He spent $\frac{2}{3}$ of the money on rides and was left with $27.50.

A. Write and solve an equation to find how much money, m, Alejandro brought with him to the water park. Show your work.

B. Explain how you can check your solution.

Go On ▶

24. Andrea spent twice as many hours studying as Jonah this month. Jonah spent 7 fewer hours studying this month than last month.

A. Let h represent the number of hours Jonah spent studying last month. Write an algebraic expression for the number of hours Andrea spent studying this month.

B. Andrea used "the difference of 2 times h and 7" to write the expression. Explain why she is correct or incorrect.

Go On ▶

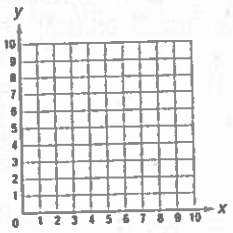
25. Amelia is going to buy some cards for her friends. Each card costs $3. She finds a coupon for $2 off the total purchase.

A. Write an equation that shows the number of cards purchased, x, and the total cost, y.

B. Complete the table below based on the equation you wrote in part A.

x	y
1	
2	
3	

C. Graph the relationship on the coordinate grid below.



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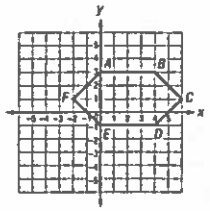
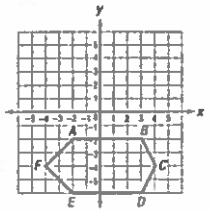
STOP

1. The coordinates of the vertices of hexagon *ABCDEF* are $A(-4, 5)$, $B(-2, 5)$, $C(-1, 3)$, $D(-2, 1)$, $E(-4, 1)$, and $F(-5, 3)$. Which grid shows this polygon?

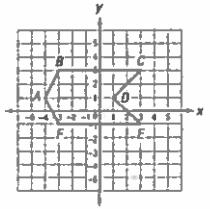
A.



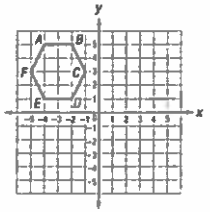
B.



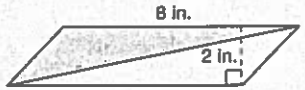
C.



D.



2. Two triangles are formed by the diagonal of the parallelogram below.



What is the area of the shaded triangle?

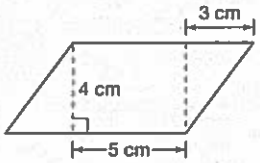
A. 8 in.^{2}

B. 12 in.^{2}

C. 16 in.^{2}

D. 18 in.^{2}

3. Nasim drew the parallelogram below.



What is the area of the parallelogram?

A. 12 square centimeters

B. 15 square centimeters

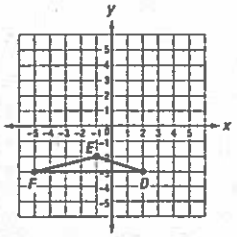
C. 28 square centimeters

D. 32 square centimeters

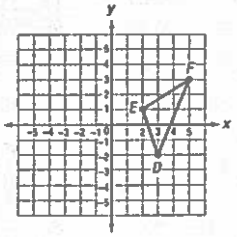
Go On ▶

4. The coordinates of the vertices of triangle *DEF* are $D(-3, 2)$, $E(-2, -1)$, and $F(-5, -3)$. Which grid shows triangle *DEF*?

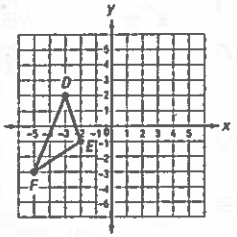
A.



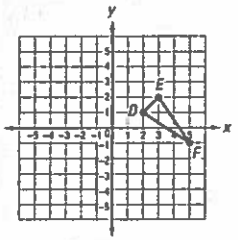
B.



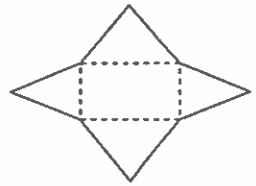
C.



D.



5. The figure below is the net of a three-dimensional figure.



If the net were folded along the dashed lines, what three-dimensional figure would it form?

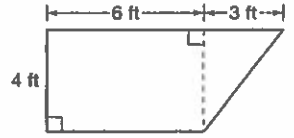
A. rectangular prism

B. cube

C. triangular prism

D. rectangular pyramid

6. The figure below is a trapezoid.



What is the area of the trapezoid?

A. 12 ft^2

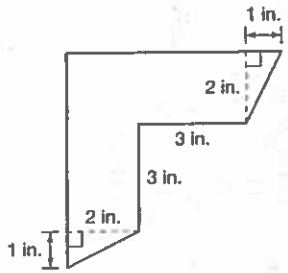
B. 15 ft^2

C. 24 ft^2

D. 30 ft^2

Go On ▶

7. Sandra is placing molding on the corners of the entryway to her home. The figure below shows the dimensions of the corner molding.



What is the area of the figure?

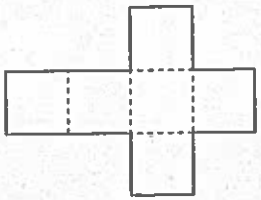
A. 16 in.^{2}

B. 18 in.^{2}

C. 20 in.^{2}

D. 22 in.^{2}

8. Kim drew this net of a three-dimensional figure.

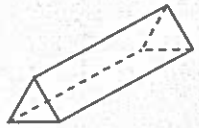


If the net were folded along the dashed lines, what would it look like?

A. 

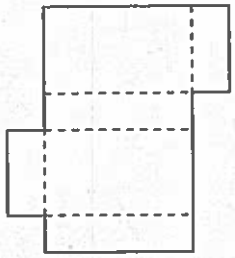
B. 

C. 

D. 

Go On ▶

9. The figure below is the net of a three-dimensional figure.



If the net were folded along the dashed lines, what three-dimensional figure would it form?

A. rectangular prism

B. cube

C. triangular prism

D. rectangular pyramid

10. Aidan is filling a new kiddie pool with water. The pool is the shape of a rectangular prism and is $\frac{3}{4}$ foot deep, $6\frac{1}{2}$ feet wide, and 8 feet long. What is the volume of the kiddie pool?

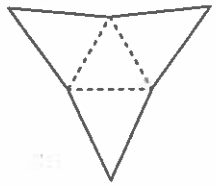
A. 35 ft^3

B. 39 ft^3

C. $42\frac{3}{4}$ ft^3

D. $45\frac{1}{2}$ ft^3

11. The figure below is the net of a three-dimensional figure.



If the net were folded along the dashed lines, what three-dimensional figure would it form?

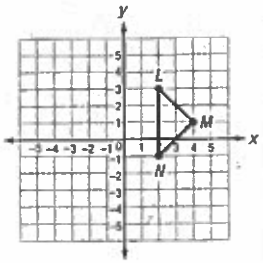
A. triangular prism

B. rectangular prism

C. square pyramid

D. triangular pyramid

12. Triangle *LMN* is shown on the grid below.



What is the length of side *LN*?

A. 2 units

B. 3 units

C. 4 units

D. 5 units

Go On ▶

13. A rectangular prism has a length of $\frac{1}{2}$ foot and a height of $\frac{1}{4}$ foot. What is the width of the right rectangular prism if its volume is $\frac{1}{4}$ cubic foot?

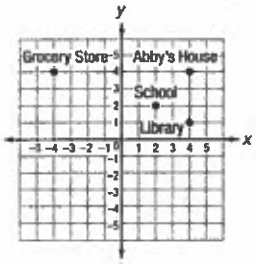
A. $\frac{1}{4}$ ft

B. $\frac{1}{2}$ ft

C. 2 ft

D. 4 ft

14. Below is a map of Abby's neighborhood with each unit representing one block.



What is the distance from Abby's house to the grocery store?

A. 2 blocks

B. 4 blocks

C. 8 blocks

D. 10 blocks

15. The area of the base of a toy box is 6 square feet. What is the volume of the toy box if its height is $2\frac{1}{2}$ feet?

A. $3\frac{1}{2}$ ft^3

B. 12 ft^3

C. 15 ft^3

D. $26\frac{1}{2}$ ft^3

16. Parallelogram $ABCD$ has vertices at $A(-2, 3)$, $B(4, 3)$, $C(3, 1)$, and $D(-3, 1)$. What is the length of side AB?

A. 3 units

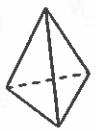
B. 4 units

C. 5 units

D. 6 units

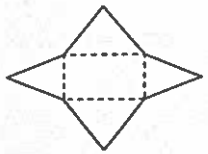
Go On ▶

17. The figure below is a pyramid.

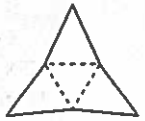


Which could be a net for this pyramid?

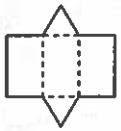
A.



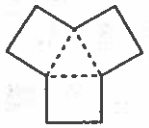
B.



C.



D.



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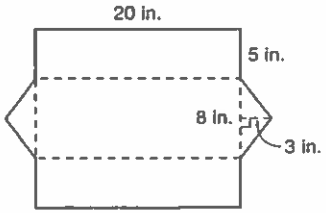
18. The net of a triangular prism is shown below.



What is the surface area of the triangular prism?

A. 284 square inches

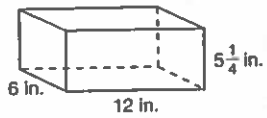
B. 372 square inches

C. 384 square inches

D. 504 square inches

Go On ▶

19. Eva stores art supplies in a box that fits under her bed. The dimensions of the box are shown below.



Which equation can be used to find the volume of the box in cubic inches?

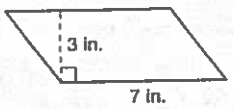
A. $V = 18 \times 5\frac{1}{4}$

B. $V = 72 \times 5\frac{1}{4}$

C. $V = 126 \times 5\frac{1}{4}$

D. $V = 630 \times 5\frac{1}{4}$

20. The parallelogram below has a base of 7 inches and a height of 3 inches.



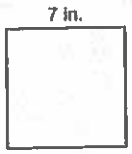
Which rectangle has the same area as the parallelogram?

A.

B.

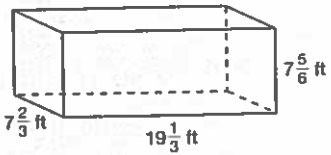
C.

D.



Go On ▶

21. A shipping crate carrying e-readers has a length of $19\frac{1}{3}$ feet, a width of $7\frac{2}{3}$ feet, and a height of $7\frac{5}{6}$ feet.



What is the volume of the shipping crate? Show your work.

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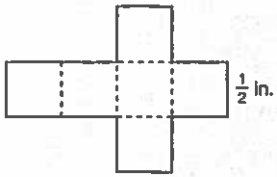
Go On ▶

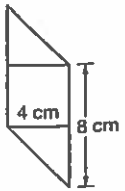
22. Below is a net of the sugar cube that Ms. Temple put in her morning tea.



What is the surface area of the sugar cube? Show your work.

Go On ▶

23. Amelia was playing with a tangram puzzle and used a square and two right triangles to form a parallelogram with a base of 8 cm and a height of 4 cm.



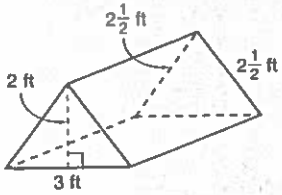
A. Draw a diagram showing how she could rearrange the shapes from the tangram to help her find the area of the parallelogram. Explain your diagram.

B. What is the area of the parallelogram? Show your work.

Duplicating any part of this book is prohibited by law.

Go On ▶

24. Qiao is building a doghouse with his mother and needs to figure out how much wood to use.



He figures out that the surface area of the doghouse will be 38 square feet before he cuts out a hole for the door.

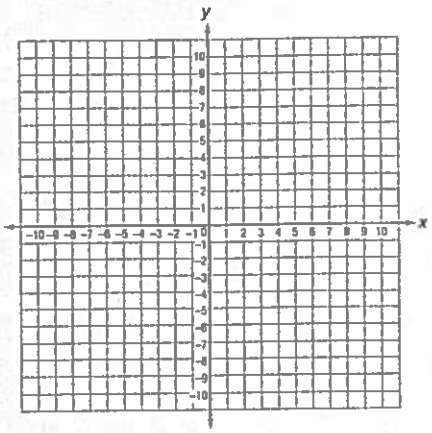
A. Draw a net of the doghouse and label the dimensions that correspond to the above image.

B. What is the length of the doghouse? Show your work.

Go On ▶

25. Quadrilateral *ABCD* has vertices at *A*(1, −2), *B*(6, −2), *C*(6, −5), and *D*(1, −5).

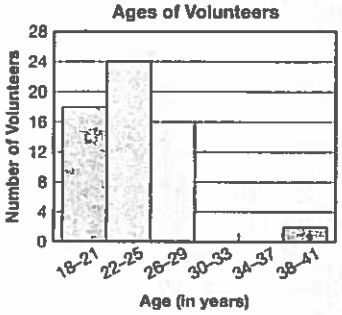
A. Draw the figure on the coordinate grid below.



B. What is the length of each side of the quadrilateral?

STOP

1. A local hospital collected data on the ages of its volunteers. The data is displayed in the histogram below.



Which of the following statements best describes the data in the histogram?

A. The ages of the volunteers are clustered from 18 years to 41 years with no outliers.

B. The ages of the volunteers are clustered from 22 years to 25 years with outliers from 38 years to 41 years.

C. The ages of the volunteers are clustered from 18 years to 29 years with outliers from 38 years to 41 years.

D. The ages of the volunteers are clustered from 18 years to 25 years with outliers from 26 years to 41 years.

2. Which of the following is **not** a measure of center?

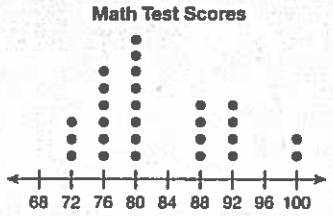
A. mean

B. median

C. mode

D. range

3. Ms. Navarro created a dot plot to display her students' scores on a recent math test.



Based on the data in the dot plot, how many students does Ms. Navarro have?

A. 8

B. 17

C. 27

D. 28

Go On ▶

4. Which of the following is a statistical question?

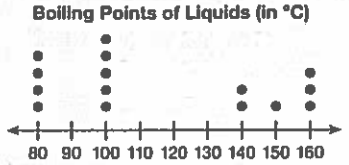
A. How many women voted in the last election?

B. How many people voted in each district in the last election?

C. Who won the last election?

D. How many candidates ran in the last election?

5. Ms. Abdullah asked her science class to test the boiling points of various liquids. The class's data is displayed in the dot plot shown below.



Which statement best describes the data in the dot plot?

A. The dot plot shows temperatures at which liquids boil. The units used are degrees Celsius.

B. The dot plot shows temperatures at which liquids boil. The units used are degrees Fahrenheit.

C. The dot plot shows the time it takes liquids to boil. The units are minutes.

D. The dot plot shows the masses of boiling liquids. The units are centigrams.

6. Hakeem would like to know if students in his school speak more than one language. Which of the following is the best statistical question for Hakeem to ask?

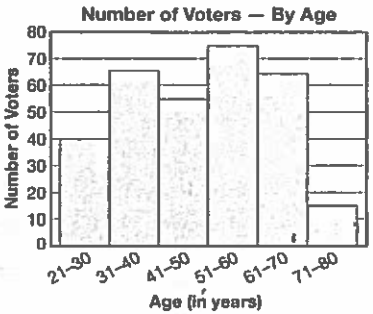
A. How many language classes does the school offer?

B. Does Mr. Perez speak Spanish at home?

C. Will Mrs. Romero teach Portuguese next year?

D. How many languages do you speak?

7. Vivian wanted to study if age was a factor in whether people in her town voted in a recent election. She conducted a survey, and then displayed her data in the histogram shown below.



How many people did Vivian survey?

A. 75

B. 205

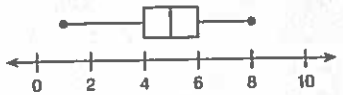
C. 315

D. 350

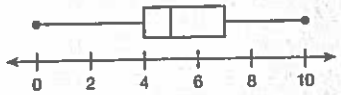
Go On ▶

8. Luis collected data on the number of goals scored by the boys' and girls' hockey teams at his school. His data is displayed in the box plots shown below.

Goals Scored by Boys' Hockey Team



Goals Scored by Girls' Hockey Team



Which of the following statements best describes the data?

A. The data for the boys' team and the girls' team have different medians, but show the same variability.

B. The data for the boys' team and the girls' team have the same median, but the data for the girls' team shows more variability.

C. The data for the boys' team and the girls' team have the same mean, but the data for the girls' team shows more variability.

D. The data for the boys' team and the girls' team have the same median, but the data for the boys' team shows more variability.

9. A state trooper kept track of the number of speeding tickets he gave out each week over the course of seven weeks. His data is shown in the table below.

Tickets Given Out

Week	Number of Tickets
1	38
2	33
3	51
4	44
5	57
6	38
7	40

Which of the following statements best describes the data in the table?

A. The variability of the data is shown by the mean, which is 43.

B. The center of the data is shown by the mean, which is 43.

C. The variability of the data is shown by the mean, which is 38.

D. The center of the data is shown by the mean, which is 38.

Go On ▶

10. Chamique recorded the low temperature each day for 9 days. She then created the table below to display her data.

Low Temperatures

Day	Temperature (in °F)
1	34
2	41
3	37
4	40
5	33
6	38
7	37
8	43
9	48

What are the mean and the median low temperatures that Chamique recorded?

A. mean: 39°F; median: 38°F

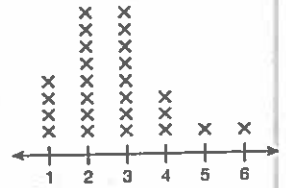
B. mean: 38°F; median: 39°F

C. mean: 39°F; median: 37°F

D. mean: 37°F; median: 38°F

11. Deron asked the students in his class how many children were in their families, including themselves. He displayed his data in the line plot shown below.

Number of Children in Students' Families



Which of the following statements best describes the data in Deron's line plot?

A. The variability of the data is shown by its median and mode. The median is 2 and the modes are 2 and 3.

B. The variability of the data is shown by its median and mode. The median is 3 and the mode is also 3.

C. The center of the data is shown by its median and mode. The median is 2 and the mode is also 2.

D. The center of the data is shown by its median and mode. The median is 3 and the modes are 2 and 3.

Go On ▶

12. A museum recorded the number of visitors that came each day for 10 days. The data is shown in the table below.

Museum Visitors

Day	Number of Visitors
1	19,784
2	25,306
3	17,880
4	13,055
5	14,629
6	18,010
7	15,441
8	17,550
9	20,005
10	21,263

Which are the range and the interquartile range (IQR) for the museum's number of visitors over those 10 days?

A. range: 12,251; IQR: 4,564

B. range: 12,251; IQR: 4,890

C. range: 25,306; IQR: 4,890

D. range: 25,306; IQR: 5,599

13. For his birthday, Travis received a field guide to local birds. He went to a nearby park on the weekends to see how many different kinds of birds he could spot. He recorded the number of birds he saw each day in the list below.

6, 15, 7, 14, 11, 13, 15, 15

What is the mean absolute deviation (MAD) of Travis's data?

A. 2

B. 3

C. 8

D. 12

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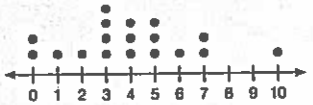
14. Amy Lynn surveyed her classmates to see how many songs they had each downloaded last week. Her data is shown in the list below.

0, 3, 4, 5, 10, 6, 4, 5, 4,
5, 3, 0, 5, 7, 1, 7, 3, 2

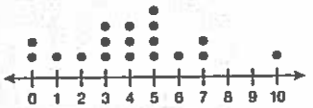
Which of the dot plots below best reflects Amy Lynn's data?

A. **Number of Songs Downloaded**

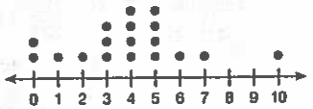
B. **Number of Songs Downloaded**



C. **Number of Songs Downloaded**

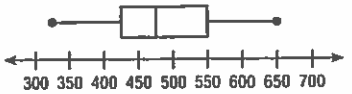


D. **Number of Songs Downloaded**



15. A supermarket collected data on how many coupons its customers redeemed each day over the course of one month. The supermarket's data is reflected in the box plot shown below.

Coupons Redeemed Each Day



Which of the following lists bests reflects the data in the box plot?

A. median: 425; first quartile: 325; third quartile: 475; IQR: 50

B. median: 425; first quartile: 325; third quartile: 550; IQR: 225

C. median: 475; first quartile: 425; third quartile: 550; IQR: 125

D. median: 475; first quartile: 425; third quartile: 650; IQR: 225

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16. Blair is a fan of professional baseball. She wants to find out if her classmates like baseball as well. She plans to survey her classmates by asking them this question:

How many Major League Baseball teams can you name?

Which of the following statements best describes Blair's question?

A. Blair's question is not a statistical question because she can only expect to get one response.

B. Blair's question is not a statistical question because it does not ask whether her classmates like baseball.

C. Blair's question is a statistical question because there are more than two teams in Major League Baseball.

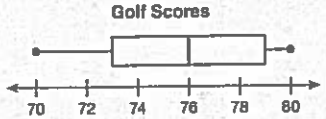
D. Blair's question is a statistical question because she can expect to get different responses.

17. Twenty players participated in a local golf tournament. The players' scores on the first day of the tournament are shown below.

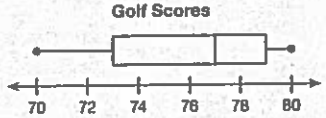
78, 79, 70, 75, 73, 73, 79, 74, 77, 80,
72, 79, 73, 80, 75, 78, 75, 78, 72, 80

Which of the box plots below best reflects the players' scores?

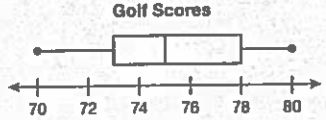
A.



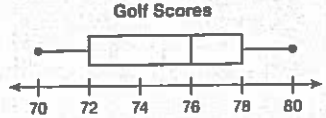
B.



C.

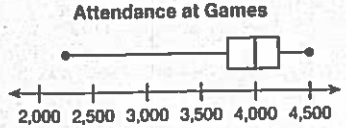


D.



Go On ▶

18. A women's professional soccer team recorded the attendance for each of its games last season. The box plot shown below reflects their attendance data.



Which statement is true?

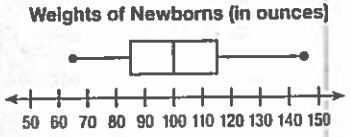
A. The median is the best measure of the variability of the data because half the data ranges from about 3,750 to about 4,200.

B. There is more variability in the upper quarter of the data than in the lower 75% of the data.

C. The interquartile range is a good measure of the variability of the data because half the data is clustered from about 3,750 to 4,200.

D. The range is the best measure of the variability of the data because the data is evenly spread out from about 2,250 to 4,500.

19. A hospital recorded the weights of newborn babies over the course of the first six months of the year. The hospital's data is displayed in the box plot below.



Which of the following statements best describes the data in the box plot?

A. The variability of the data is shown by its range, which is 30.

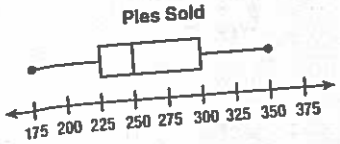
B. The variability of the data is shown by its range, which is 80.

C. The center of the data is shown by its range, which is 100.

D. The center of the data is shown by its median, which is 150.

Go On ▶

20. Annie's Pie Shop collected data on how many pies were sold each day over the course of one month. The data is shown in the box plot below.



Which of the following statements best reflects the data in the box plot?

A. The number of pies sold is clustered from 250 to 300.

B. The number of pies sold is somewhat evenly distributed from 175 to 350.

C. The number of pies sold is evenly distributed from 225 to 300.

D. The number of pies sold is clustered from 175 to 225.

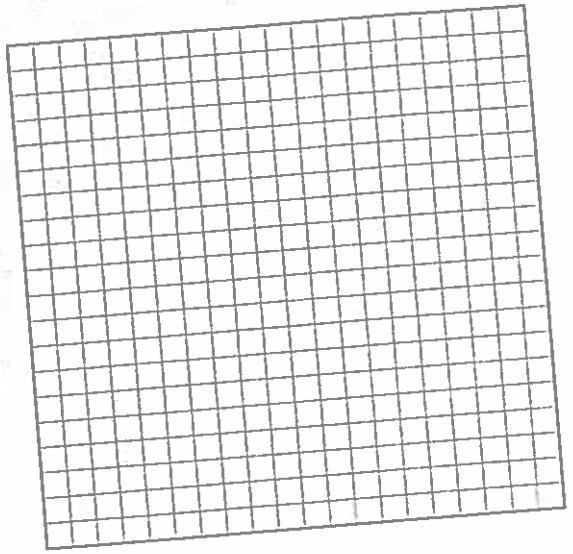
Go On ▶

21. A Web site tracked the number of pageviews each day for the last 20 days. The data is shown in the list below.

299, 233, 283, 279, 291, 292, 215, 288, 260, 252,

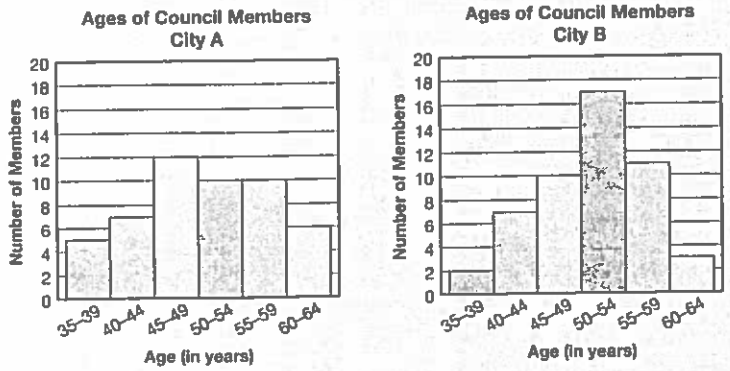
237, 290, 246, 296, 220, 284, 263, 295, 280, 275

Use the data to create a histogram. Remember to give the histogram a title and to label its axes.



Go On ▶

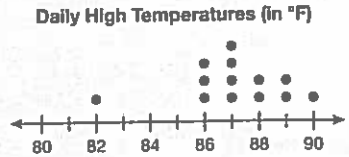
22. The ages of the members of the city councils of two cities are shown in the histograms below.



For each city, identify the interval that contains the median age of a council member. Then compare the data sets. Explain your answer.

Go On ▶

23. As part of a project for science class, Griffin recorded the high temperature each day in his town. His data is displayed in the dot plot below.

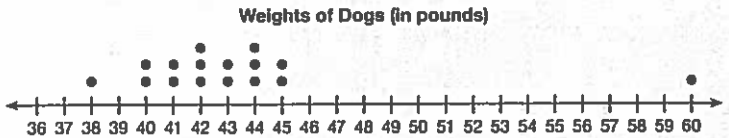


A. Sarah, one of Griffin's classmates, claims that the median high temperature is 87°F because 87°F has the most dots above it. Is Sarah's claim correct? Explain your answer.

B. What are the mean, mode, range, and interquartile range of Griffin's data? Round each measure to the nearest tenth of a degree. Show your work.

Go On ▶

24. Georgianne owns a Portuguese water dog named Kelly. She entered Kelly into a local dog show. Including Kelly, there were 16 Portuguese water dogs in the competition. The weights of the dogs are displayed in the dot plot shown below.

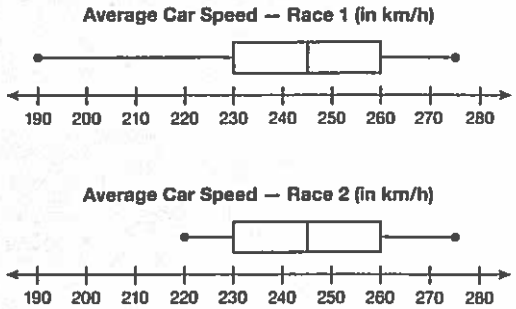


A. What are the mean and median weights, in pounds, of the Portuguese water dogs in the dog show? Round each measure to the nearest tenth of a pound.

B. Which measure of center best reflects the weights of the dogs in the competition: the mean or the median? Explain your answer.

Go On ▶

25. Francisco gathered data on the average speeds, in kilometers per hour, of each car in two races. He displayed his data in the box plots shown below.



A. What are the median, range, first quartile, third quartile, and interquartile range for each race?

B. For which race is the mean of the data likely to be greater? Explain your answer.