

TEST NAME: 6th Grade REVIEW
TEST ID: 3146112
GRADE: 06 - Sixth Grade
SUBJECT: Mathematics
TEST CATEGORY: My Classroom

Student: _____

Class: _____

Date: _____

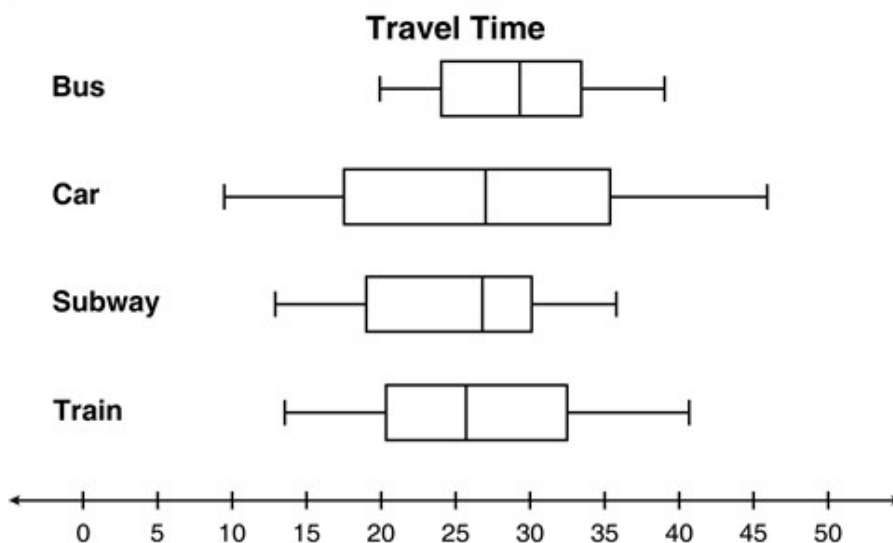
1. A company studied how much they pay employees. They found the mean and median annual salaries. These values are given in the table.

Annual Salary Data

Mean Annual Salary	\$62,000
Median Annual Salary	\$35,000

Which measure of center is best to describe salaries at the company? Select the statement that **BEST** explains your choice.

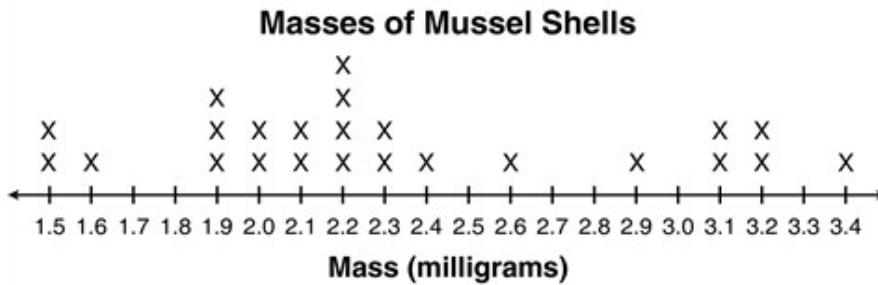
- A. the mean, because people who earn too little make the median too small
 - B. the mean, because most workers earn a salary that is near this value
 - C. the median, because it is the measure of center with the lower value
 - D. the median, because people who earn a lot make the mean too large
2. The figure shows four box-and-whisker plots. These represent variation in travel time for four different types of transportation from the beginning to the end of one route.



Conrad is at one end of the route. He is trying to decide how to get to an appointment at the other end. His appointment is in 30 minutes. Which type of transportation is **LEAST** likely to take more than 30 minutes?

- A. bus
- B. car
- C. subway
- D. train

3. Scientists randomly collect mussels attached to a pier. They measure the masses of the shells. Their results are shown in the line plot below.



They find that the median mass of a mussel shell is 2.2 milligrams. Does this measure alone give an accurate picture of the masses of shells in this mussel population?

- A. No. A measure of variability should also be reported because shell masses are so different.
 - B. No. Mode should also be reported because it is important to show the most common mass.
 - C. No. Mean should also be reported, because it is very different from the median.
 - D. Yes. The median represents the best measure of shell masses in this population.
4. **Rhett has received 196 responses for an event he is catering. Of the responses, 147 selected steak for their main course. Which ratio represents the number of responses for steak to those who chose something other than steak?**
- A. 49:147
 - B. 49:196
 - C. 147:49
 - D. 147:196

5. Rubio is grilling ground beef patties for his party. The nutritional label from the ground beef is shown.

Nutrition Facts	
Serving Size 4 ounces	
Servings per Container 8	
Amount Per Serving	
Calories 290	Calories from Fat 200
	% Daily Value*
Total Fat 23g	35%
Saturated Fat 9g	46%
Trans Fat 0g	
Cholesterol 70mg	27%
Sodium 70mg	3%
Total Carbohydrate 0g	0%
Dietary Fiber 0g	0%
Sugars 0g	
Protein 20g	

Based on the information in the label, about how many milligrams of cholesterol are recommended per day?

- A. 190
- B. 210
- C. 260
- D. 280
6. During a field trip to the Chicago Zoo, the students in Lexie's class were given the option to see the Alligator Exhibit or attend the Monkey Extravaganza Show. Of the 19 students, 8 went to see the alligators while the others attended the monkey show. Which ratio represents the number of students who went to see the alligator exhibit to those who attended the monkey show?
- A. 8:11
- B. 8:19
- C. 11:27
- D. 19:8
7. Allie bought a roll of wrapping paper that is $8\frac{1}{2}$ feet long. She is wrapping gifts for her staff and needs $1\frac{3}{4}$ feet of wrapping paper for each gift. If Allie wraps as many gifts as she can with one roll, how many feet of wrapping paper will she have left over?
- A. $\frac{6}{7}$ foot
- B. $1\frac{1}{2}$ feet
- C. $4\frac{6}{7}$ feet
- D. $6\frac{3}{4}$ feet

8. Alex used his grandmother's recipe to make $11\frac{3}{7}$ pounds of granola. If he fills as many bags as he can with $2\frac{2}{3}$ pounds of granola in each bag, how many pounds will he have left over?
- A. $\frac{16}{21}$ pound
B. $2\frac{20}{21}$ pounds
C. $4\frac{2}{7}$ pounds
D. $8\frac{16}{21}$ pounds
9. A single serving of a certain type of cereal contains 180 milligrams of salt. How many grams of salt are in each serving?
- A. 0.018 grams
B. 0.18 grams
C. 1.8 grams
D. 18 grams
10. Mrs. Rozzio is making several trays of her famous lasagna. She finds the mozzarella cheese on sale for \$4.89 per pound at her local grocery store. How much will she pay for four pounds of cheese?
- A. \$8.89
B. \$9.33
C. \$16.26
D. \$19.56
11. $400 \times 0.26 =$
- A. 0.104
B. 1.04
C. 10.4
D. 104
12. Ruby measured the height of a fence and found that it was 55 inches tall. What is another way to express that height?
- A. 4 feet 7 inches
B. 4 feet 11 inches
C. 5 feet 5 inches
D. 5 feet 7 inches

13. If 2 is substituted for x , which expression will NOT equal 5?

- A. $7 - x$
- B. $11 - 3x$
- C. $2x - 1$
- D. $4x - 3$

14.

$$0.4 \overline{)45.8}$$

- A. 11.2
- B. 11.45
- C. 112.0
- D. 114.5

15. Thora's last 6 math test scores are 91, 75, 80, 83, 88, and 90. What is Thora's median score on these 6 tests?

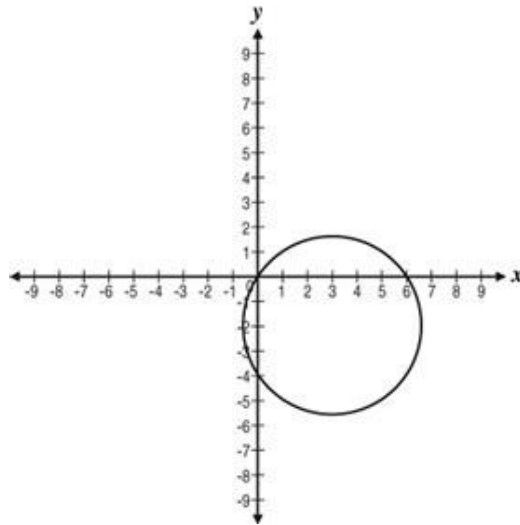
- A. 81.5
- B. 85.5
- C. 88.0
- D. 91.0

16. What is the value of S in the equation below?

$$S + 2\frac{1}{2} = 61$$

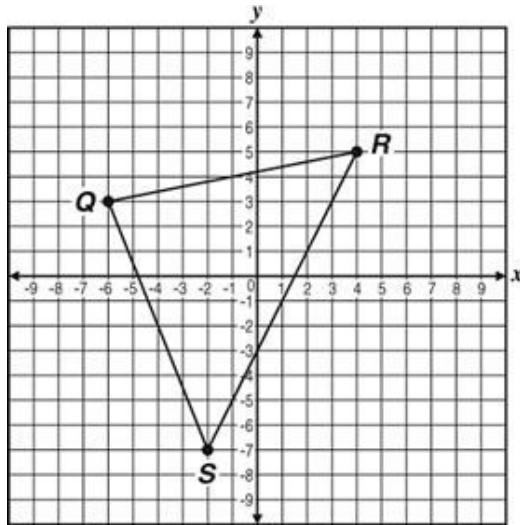
- A. 58
- B. $58\frac{1}{2}$
- C. 59
- D. $59\frac{1}{2}$

17. Which of the following points is located inside the circle shown below?



- A. $(0, -7)$
- B. $(-2, 1)$
- C. $(1, -2)$
- D. $(-1, 5)$

18. Which point is inside $\triangle QRS$?



- A. $(-1, -7)$
- B. $(-3, 3)$
- C. $(0, -5)$
- D. $(4, 0)$

19. How many milliliters are in a 1.5-liter bottle of water?

- A. 15,000
- B. 1500
- C. 150
- D. 15

20. Mrs. Washington's class has x students. Three-fourths of these students like pizza. If 21 students in the class like pizza, which equation can be solved to determine the number of students in the class?

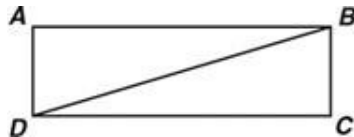
- A. $21x = \frac{3}{4}$
- B. $21x = \frac{4}{3}$
- C. $\frac{4}{3}x = 21$
- D. $\frac{3}{4}x = 21$

21. What is the mean (average) of the set of numbers below?

7, 12, 16, 10, 10

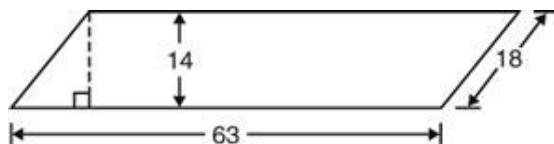
- A. 3
- B. 9
- C. 10
- D. 11

22. If the area of Triangle ABD is 12 square units, what is the area of Rectangle $ABCD$?



- A. 6 square units
- B. 12 square units
- C. 24 square units
- D. 48 square units

23. What is the area, in square units, of the parallelogram below?



- A. 154
B. 162
C. 882
D. 1134
24. What does $3^2 - 4 \times 2 + 6$ equal?
- A. 16
B. 10
C. 7
D. 4
25. Which number can replace r to make the equation below true?

$$\left(\frac{2+r}{6} + 1\right) \div 4 = \frac{3}{8}$$

- A. 0
B. 1
C. 2
D. 3
26. The library fine for an overdue book is \$0.10 per day plus a one-time charge of \$0.25 for processing. Which of the following expressions gives the fine in dollars for a book that is n days overdue?
- A. $0.25 + 0.10$
B. $0.25 + 0.10n$
C. $0.25n + 0.10$
D. $0.25n + 0.10n$

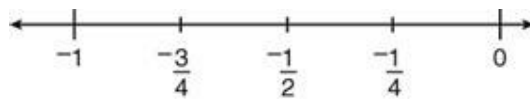
27. The table below shows the distribution of the number of absences that occurred in one month among the 30 students in Mr. Gray's class.

Number of Days Absent	0	1	2	3	4	5	6	7
Number of Students	14	8	4	1	1	0	1	1

What is the median number of absences?

- A. 0
 - B. 1
 - C. 2
 - D. 3
28. How many ounces are equivalent to 0.375 ton?
- A. 750
 - B. 1200
 - C. 6000
 - D. 12,000
29. Vickie took her pulse. She counted 96 heartbeats in 60 seconds. Which shows Vickie's heart rate?
- A. 0.625 heartbeats/second
 - B. 1.6 heartbeats/second
 - C. 36 heartbeats/second
 - D. 156 heartbeats/second
30. There are 225 pieces of cereal and 15 marshmallows in a bowl of cereal. What is the ratio of cereal pieces to marshmallow pieces?
- A. 14 to 1
 - B. 15 to 1
 - C. 16 to 1
 - D. 15 to 16

31. On this number line, where would the fraction $-\frac{1}{3}$ be represented?



- A. between 0 and $-\frac{1}{4}$
- B. between $-\frac{1}{4}$ and $-\frac{1}{2}$
- C. between $-\frac{1}{2}$ and $-\frac{3}{4}$
- D. between $-\frac{3}{4}$ and -1
32. What is the value of $6^2 + 3^2(20 - 4^2)$?
- A. 72
- B. 84
- C. 180
- D. 200
33. Teri bought a pair of jeans for \$36.00. She paid sales tax of \$2.70. What is the ratio of the sales tax to the purchase price of the jeans?
- A. $\frac{3}{4}$
- B. $\frac{3}{40}$
- C. $\frac{3}{43}$
- D. $\frac{36}{38.7}$
34. What is the value of $4^2 \div 8 + 3(5^2 - 4)$?
- A. 19
- B. 65
- C. 73
- D. 95
35. A roller coaster at an amusement park is 0.75 mile long and takes 50 seconds to complete a full ride. What is the average speed for this roller coaster, in miles per hour?
- A. 15
- B. 19
- C. 54
- D. 67

36. Steve rode 18 miles on his bike in 2 hours. Which shows Steve's average rate expressed as a unit rate?
- A. $4\frac{1}{2}$ miles/ $\frac{1}{2}$ hour
 - B. 9 miles/1 hour
 - C. 18 miles/2 hours
 - D. 36 miles/4 hours

37. The mathematics teacher wrote this procedure on the board.

Step 1: $= 75 + 8$

Step 2: $= (70 + 5) + (5 + 3)$

Step 3: $= 70 + (5 + 5) + 3$

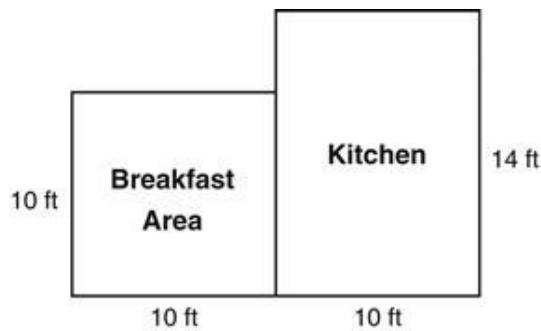
Step 4: $= 70 + 10 + 3$

Step 5: $= 80 + 3$

Step 6: $= 83$

Which property justifies Step 3?

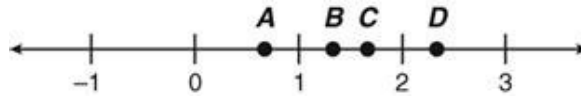
- A. distributive
 - B. commutative
 - C. associative
 - D. additive identity
38. Mariel is setting tile on the floors of her rectangular kitchen and square breakfast area. The diagram shows the dimensions of the 2 rooms. Each tile covers 1 square foot.



If each tile costs \$1.29, how much will Mariel pay to buy tile for both rooms?

- A. \$269.00
- B. \$309.60
- C. \$1,946.00
- D. \$1,986.60

39. Which point on the number line represents $1\frac{2}{3}$?



- A. Point *A*
- B. Point *B*
- C. Point *C*
- D. Point *D*

40. What is 62% of \$10.50?

- A. \$4.30
- B. \$6.20
- C. \$6.51
- D. \$9.88

41. A recipe for fruit punch requires 2.5 gallons of pineapple juice. How many quarts of pineapple juice are required for the recipe?
(1 gallon = 4 quarts)

- A. 0.625
- B. 1.6
- C. 6.5
- D. 10

42. A family uses 9.1 gallons of drinking water each week. What is the family's rate of water use in gallons per day?

- A. 1.3
- B. 1.8
- C. 2.1
- D. 13

43. The length of a piece of ribbon is $1\frac{1}{2}$ yards. How long is the ribbon in inches?

(1 yard = 36 inches)

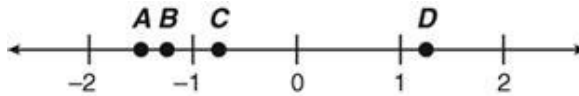
- A. 0.042
- B. 4.5
- C. 18
- D. 54

44. Ms. Martinez awards points to her groups of students for answering questions correctly. She also takes away points for incorrect answers.

Group	Number of Points
A	-5
B	2
C	-7
D	6

Based on the information in the table, in which order did the groups finish when the points are ordered from GREATEST to LEAST?

- A. Group C, Group D, Group A, Group B
 - B. Group D, Group B, Group A, Group C
 - C. Group C, Group A, Group B, Group D
 - D. Group D, Group B, Group C, Group A
45. Which point on the number line below represents -1.25 ?



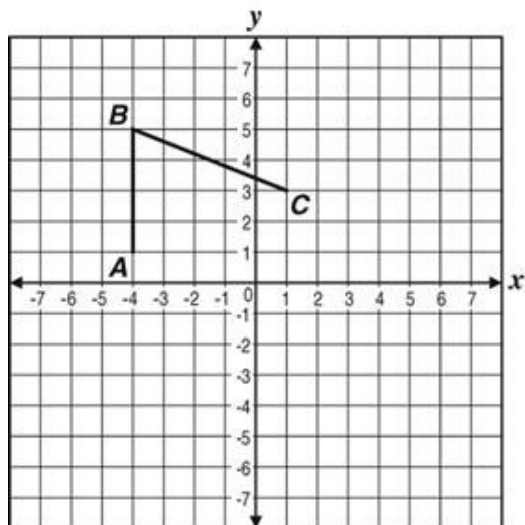
- A. Point A
 - B. Point B
 - C. Point C
 - D. Point D
46. A horse can run 0.75 mile in 1.2 minutes. What is its average speed in miles per hour?
- A. 0.625
 - B. 0.9
 - C. 1.6
 - D. 37.5
47. The current temperature in a city is 47°F . The temperature is dropping at a rate of 2.5°F every $\frac{1}{2}$ hour. How long will it take the temperature to reach the freezing point, 32°F ?
- A. 3 hours
 - B. 6 hours
 - C. 9 hours
 - D. 15 hours

48. Which property justifies the following?

$$\left(\frac{2}{3}\right)(x - 9) = \frac{2}{3}x - 6$$

- A. identity property
- B. associative property
- C. distributive property
- D. commutative property

49. Two sides of parallelogram $ABCD$ are shown in the graph below.



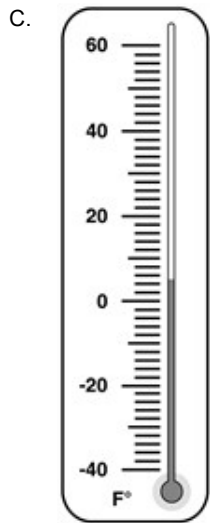
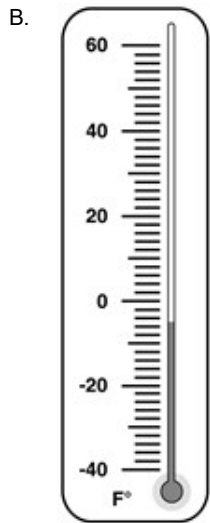
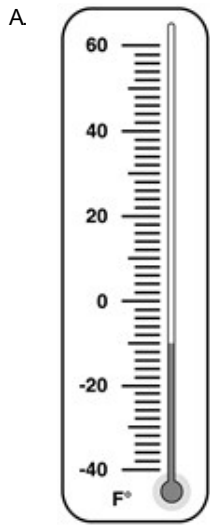
What should be the coordinates of point D ?

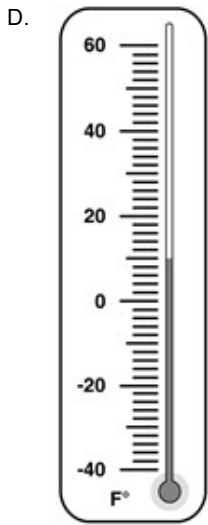
- A. $(1, -2)$
- B. $(1, -1)$
- C. $(1, 0)$
- D. $(1, 1)$

50. Yucca Manor has sunny days for 80% of the year. If there are 365 days in a normal year, how many sunny days are there each year in Yucca Manor?

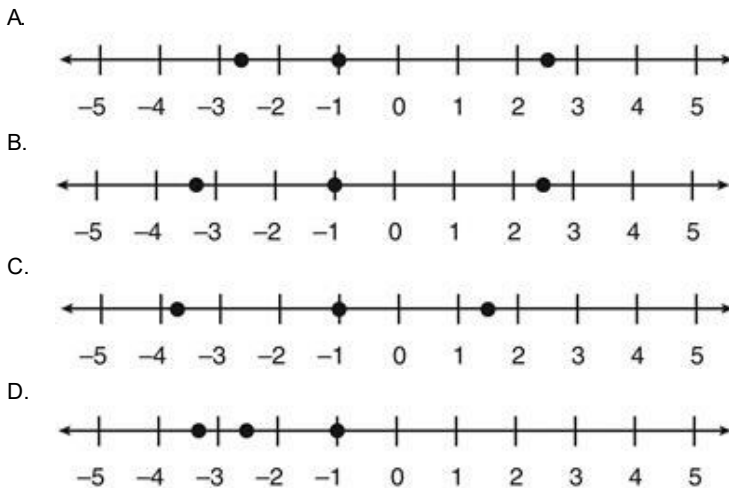
- A. 73
- B. 80
- C. 248
- D. 292

51. Avery checked her outdoor thermometer on a cold winter morning and noted that it read 5 degrees Fahrenheit. Which thermometer shows the opposite of this temperature?





52. Which shows the numbers $-3\frac{1}{3}$, $2\frac{1}{2}$, and -1 placed correctly?

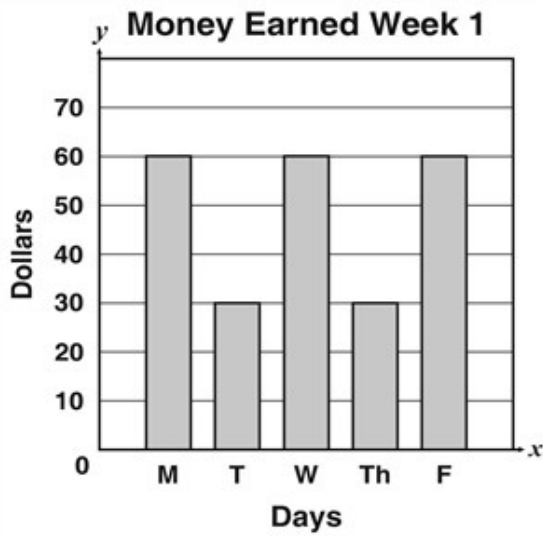


53. Huong packed 189 cubes into a small, rectangular, empty box. The cubes completely filled the box. The edge length of each cube was $\frac{1}{2}$ of an inch. Which statement correctly finds and justifies the box's volume based on the number of cubes packed into it?

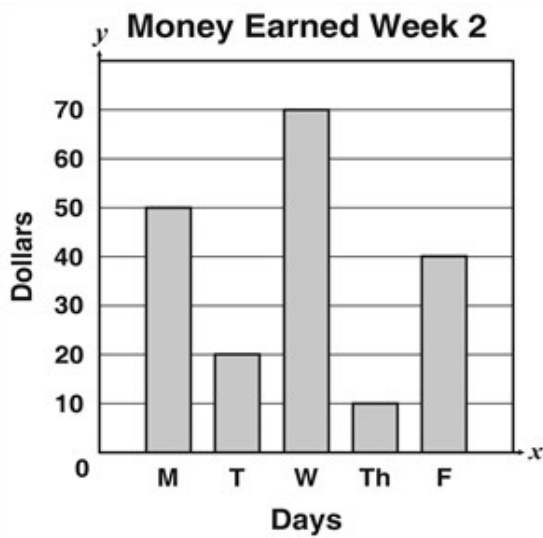
- A. There are 189 cubes in the box. Its volume is $189 \times \frac{1}{8}$ cubic inches, because each cube's volume is $\frac{1}{8}$ of a cubic inch.
- B. There are 189 cubes in the box. Its volume is $189 \times \frac{1}{4}$ cubic inches, because each cube's volume is $\frac{1}{4}$ of a cubic inch.
- C. There are 189 cubes in the box. Its volume is $189 \times \frac{1}{2}$ cubic inches, because each cube's volume is $\frac{1}{2}$ of a cubic inch.
- D. There are 189 cubes in the box. Its volume is 189 cubic inches, because the volume of a cube is 1 cubic inch.

54. The bar graphs depict the amount of money earned each day of the week for 4 weeks. Which bar graph displays data without variability?

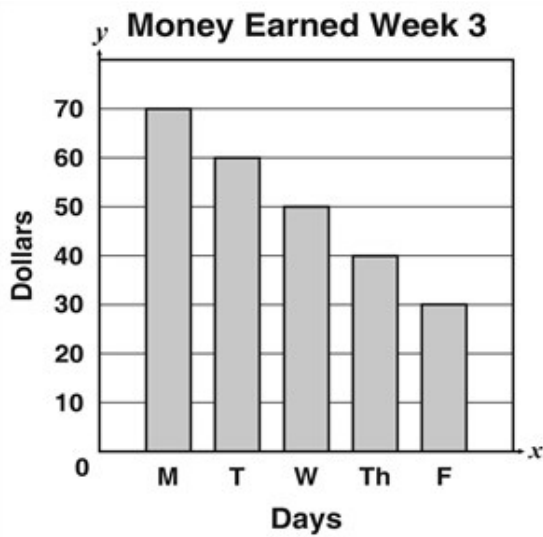
A.



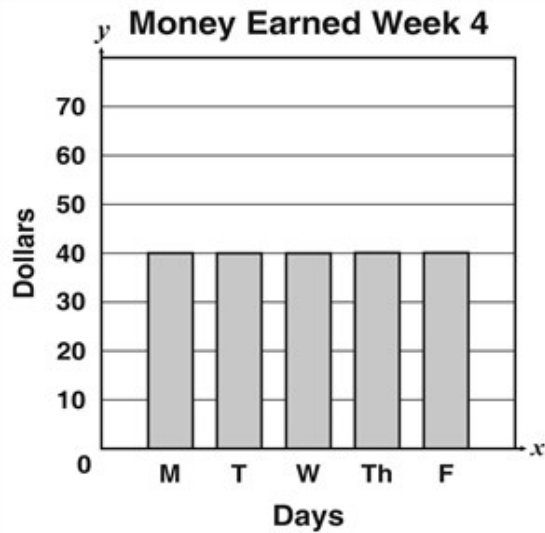
B.



C.



D.



55. Each of the following describes a variable expression.

1. The area of a rectangle that is $(x + 2)$ units long and 4 units wide.

$$4(x + 2)$$

2. The perimeter of a rectangle that is $(x + 3)$ units long and $(x + 1)$ units wide.

$$2(x + 3) + 2(x + 1)$$

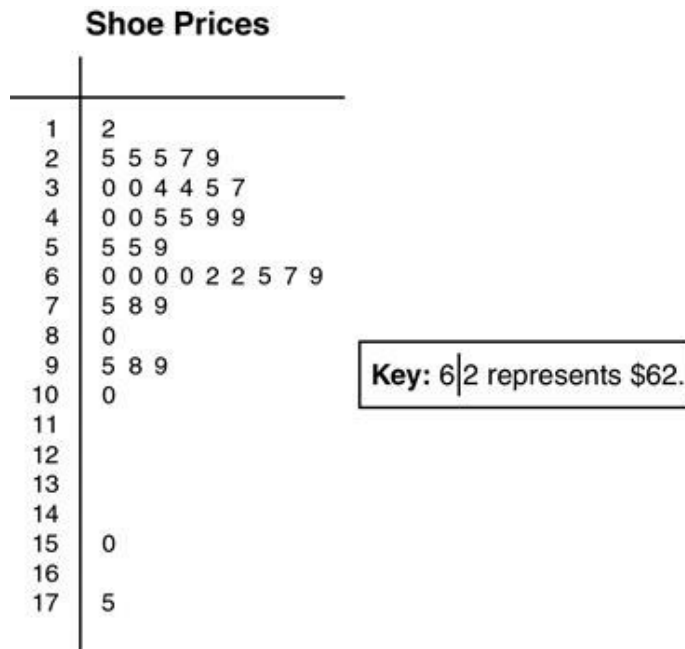
3. The volume of a rectangular prism that is 2 units long, 1 unit wide, and $(2x + 4)$ units high.

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

Which variable expressions are equivalent?

- A. 1 and 2
- B. 1 and 3
- C. 2 and 3
- D. 1, 2, and 3

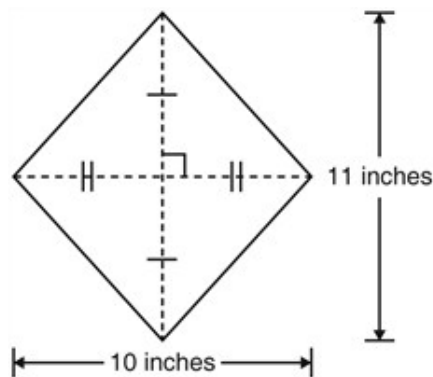
56. The stem-and-leaf plot lists the prices, in dollars, of 40 pairs of shoes at a store.



Which statement justifies the measure of center that should be used to describe the data?

- A. The mean is the most appropriate measure of center because the least price is an outlier.
- B. The median is the most appropriate measure of center because the least price is an outlier.
- C. The mean is the most appropriate measure of center because the greatest price is an outlier.
- D. The median is the most appropriate measure of center because the greatest price is an outlier.

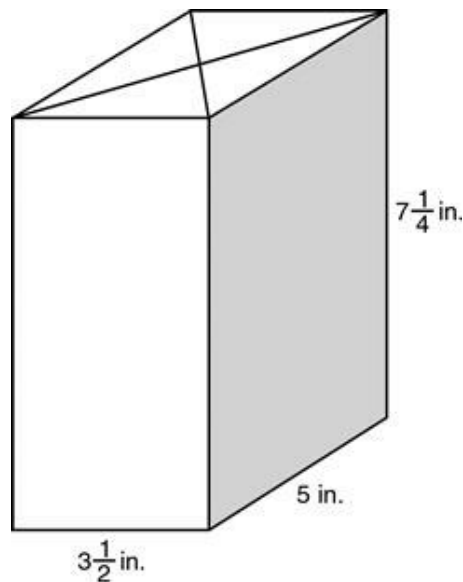
57. The diagonals of the rhombus below are measured in inches.



What is the area of the rhombus, in square inches?

- A. 13.75
- B. 27.5
- C. 55
- D. 110

58. The average annual temperature during the years 1971 to 2000 was -3.0 degrees Celsius ($^{\circ}\text{C}$) in Alaska and 21.1°C in Hawaii. Based on this data, which statement is true?
- The average temperature in Alaska was 3 degrees below 0°C , and the average temperature in Hawaii was 21.1 degrees above 0°C .
 - The average temperature in Alaska was 3 degrees above 0°C , and the average temperature in Hawaii was 21.1 degrees above 0°C .
 - The average temperature in Alaska was 3 degrees below 0°C , and the average temperature in Hawaii was 21.1 degrees below 0°C .
 - The average temperature in Alaska was 3 degrees above 0°C , and the average temperature in Hawaii was 21.1 degrees below 0°C .
59. Madge had exactly 90 cubic inches of water. She poured the water into a container in the shape of a rectangular prism shown below. The dimensions of the container are given in inches (in.).



Based on this information, which statement is true?

- Madge filled the container and had $36\frac{7}{8}$ cubic inches of water left over.
- Madge filled the container and had $74\frac{1}{4}$ cubic inches of water left over.
- Madge added all of the water to the container and had $36\frac{7}{8}$ cubic inches of space left in the container.
- Madge added all of the water to the container and had $74\frac{1}{4}$ cubic inches of space left in the container.

60. The balance in each person's checking account is given.

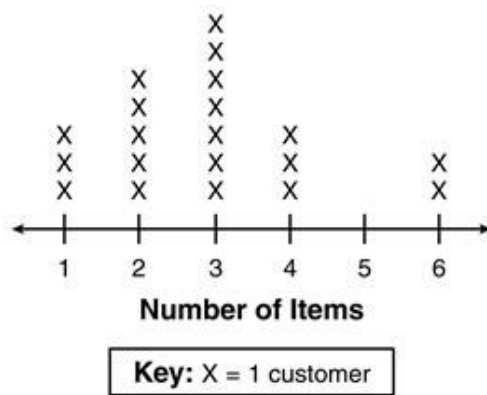
Chelsea -\$10	Barry -\$44	Celia -\$4
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Barry will have to deposit more money than Chelsea in order to reach a \$0 balance.

Which inequality could be used to support the above statement?

- A. $|-4| > 0$
- B. $|-44| > |-10|$
- C. $|-44| > -4$
- D. $-10 > -44$

61. The number of items purchased by the last 20 customers at a store is shown in the line plot.



Which table represents these data?

A. **Items Purchased**

Number of Customers	Number of Items
1	3
2	5
3	7
4	3
5	0
6	2

B. **Items Purchased**

Number of Customers	Number of Items
1	3
2	5
3	7
4	3

5	2
6	0

C.

Items Purchased

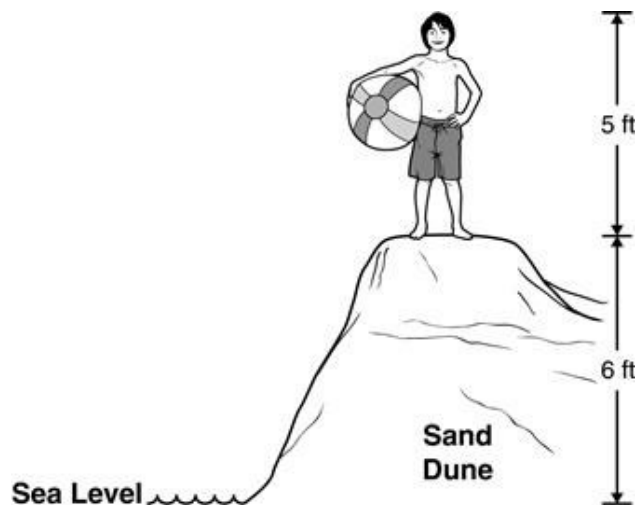
Number of Items	Number of Customers
1	3
2	5
3	7
4	3
5	0
6	2

D.

Items Purchased

Number of Items	Number of Customers
1	3
2	5
3	7
4	3
5	2
6	0

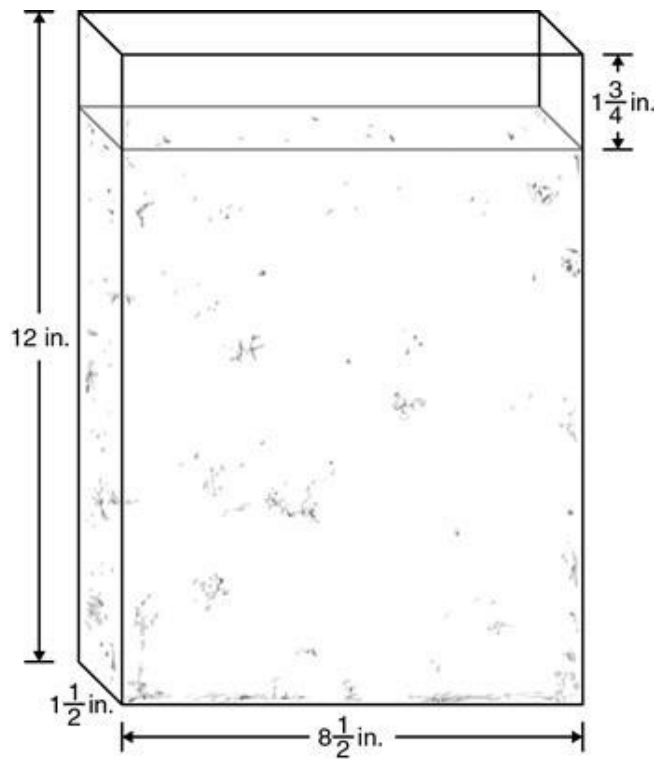
62. Robbie is 5 feet tall. He stood near the seashore on top of a sand dune that had an elevation of 6 feet.



How could this information be represented?

- A. use 0 to represent the top of the sand dune;
use -6 to represent sea level;
use -5 to represent the top of Robbie's head
- B. use 0 to represent the top of the sand dune;
use $+6$ to represent sea level;
use $+5$ to represent the top of Robbie's head
- C. use 0 to represent sea level;
use -6 to represent the top of the sand dune;
use -11 to represent the top of Robbie's head
- D. use 0 to represent sea level;
use $+6$ to represent the top of the sand dune;
use $+11$ to represent the top of Robbie's head

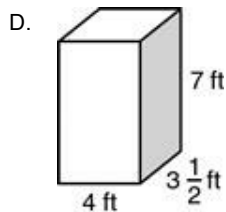
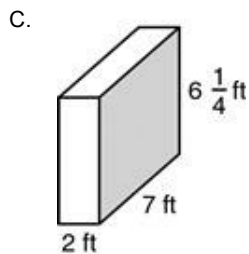
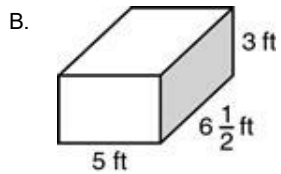
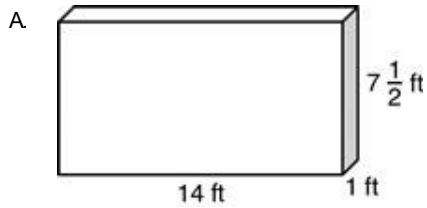
63. A container in the shape of a rectangular prism is used to hold sugar. The height of the container is 12 inches (in.). The current amount of sugar in the container is $1\frac{3}{4}$ inches from the top of the container as shown in the figure below.



What is the volume, in cubic inches, of the total amount of sugar in the container?

- A. $130\frac{11}{16}$
- B. $137\frac{1}{16}$
- C. $143\frac{7}{16}$
- D. $175\frac{5}{16}$

64. A manager at a shipping company will purchase boxes in the shape of right rectangular prisms. He wants the volume of each box to be exactly 98 cubic feet. Which figure shows a box with the dimensions, in feet (ft), that the manager will purchase?

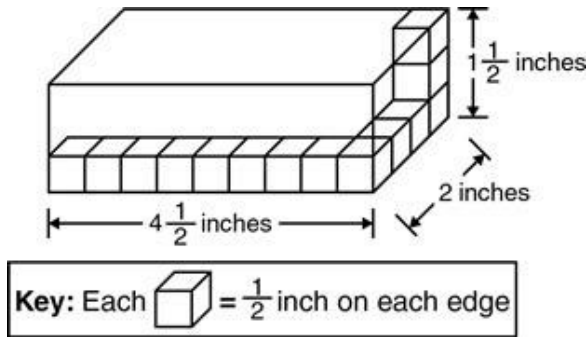


65. Which set of numbers only contains solutions to the inequality?

$$3x \geq 18$$

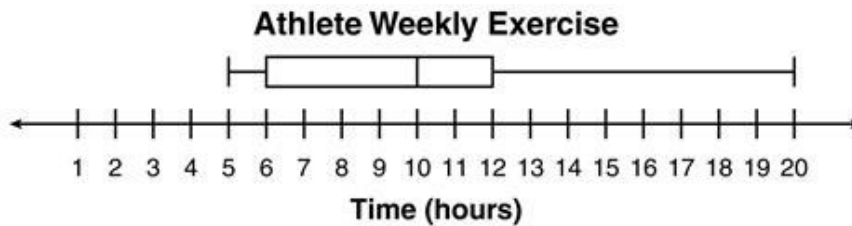
- A. {3, 4, 5}
- B. {4, 5, 6}
- C. {5, 6, 7}
- D. {6, 7, 8}

66. A storage box is shaped like a rectangular prism, as shown below. Skylar stored $\frac{1}{2}$ -inch cubes in the box.



How many cubes are needed to completely fill the box?

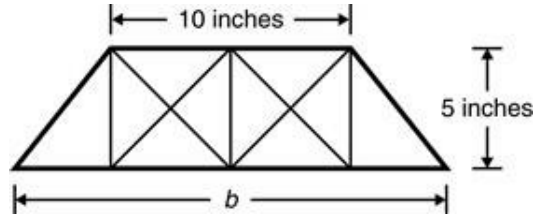
- A. 108 cubes
 - B. 72 cubes
 - C. 54 cubes
 - D. 27 cubes
67. The box-and-whisker plot shown displays the number of hours 20 student athletes spend exercising during the week.



Which number BEST describes the range of the data in the box-and-whisker plot?

- A. 25
- B. 15
- C. 10
- D. 6

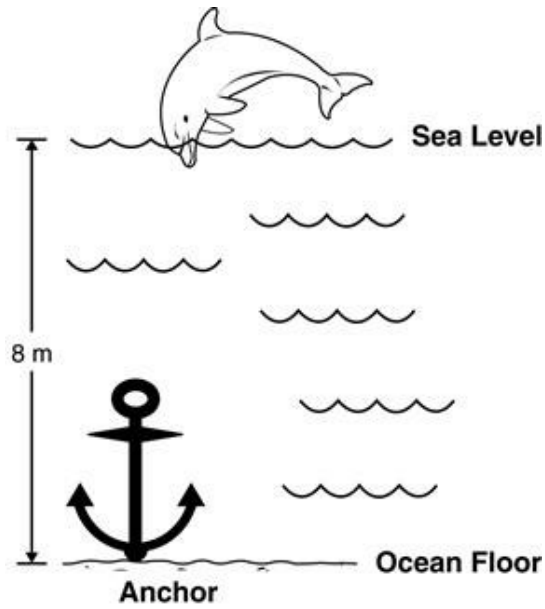
68. Jason drew a bold line on a drawing to show the part of a bridge structure that forms a trapezoid.



The area of the trapezoid is 70 square inches. What is the length of the larger base?

- A. 18 inches
- B. 20 inches
- C. 38 inches
- D. 50 inches

69. A ship anchor was sitting on the ocean floor 8 meters below the sea level while a dolphin was swimming at sea level.



Note: The figure is not drawn to scale.

If any object below the sea level is considered to be at a negative location, which number line could be used to represent the positions of the anchor on the ocean floor and the dolphin at sea level?

- A. A number line with arrows at both ends, ranging from -10 to 10. Major tick marks are labeled at -10, 0, and 10. There are 10 small tick marks between each major tick mark. A dolphin icon is placed at the 0 mark, and an anchor icon is placed at the 8 mark.
- B. A number line with arrows at both ends, ranging from -10 to 10. Major tick marks are labeled at -10, 0, and 10. There are 10 small tick marks between each major tick mark. An anchor icon is placed at the -8 mark, and a dolphin icon is placed at the 0 mark.
- C. A number line with arrows at both ends, ranging from -10 to 10. Major tick marks are labeled at -10, 0, and 10. There are 10 small tick marks between each major tick mark. A dolphin icon is placed at the -8 mark, and an anchor icon is placed at the 8 mark.
- D. A number line with arrows at both ends, ranging from -10 to 10. Major tick marks are labeled at -10, 0, and 10. There are 10 small tick marks between each major tick mark. An anchor icon is placed at the -8 mark, and a dolphin icon is placed at the 8 mark.

70. A library had a used book sale for 4 days. The library paid \$25 for an advertisement each day of the sale and sold each book (b) for \$2.00. The expression below represents the amount of money the library raised at the book sale.

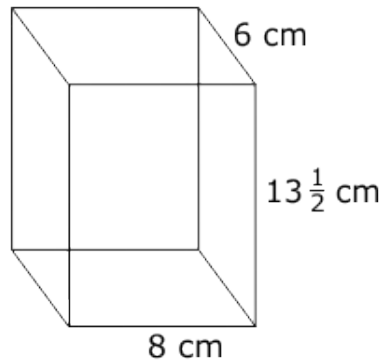
$$2b - 25(4)$$

How much money was raised when 400 books were sold per day?

- A. \$8,000
B. \$3,100
C. \$1,500
D. \$700
71. LaTisha used a box in the shape of a rectangular prism to mail a package. The area of the base of the box was $40\frac{1}{4}$ square inches, and the height was $6\frac{3}{4}$ inches. What was the volume of this box in cubic inches?
- A. $543\frac{3}{8}$
B. $480\frac{3}{8}$
C. $271\frac{11}{16}$
D. $240\frac{3}{16}$
72. A student will ask his classmates one survey question. Which of the following is a statistical question that should result in varied responses?
- A. What is the length of a meter stick in centimeters?
B. What is the total number of feet in 8 yards?
C. What is the sum of the digits in your telephone number?
D. What is the total number of eggs in 5 dozen?
73. Which shows a statistical question regarding a data set?
- A. What is your favorite color?
B. What is the total number of eggs in 5 dozen?
C. What is the total number of ounces in a gallon?
D. What is the height of the tallest player on a team?

74. Mr. Grant made a bar graph with student scores on a test. He noted an overall distribution shape skewed to the left. Based on this information, which statement is MOST likely true?
- A. All of the scores were above 10%.
 - B. All of the scores were below 90%.
 - C. Most of the scores were around 10%.
 - D. Most of the scores were around 90%.

75. What is the volume of the rectangular prism shown below?



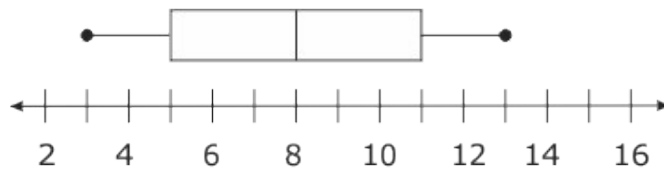
- A. $1,296 \text{ cm}^3$
 - B. 648 cm^3
 - C. 189 cm^3
 - D. 108 cm^3
76. Casey needs to paint a rectangular wall that measures $3\frac{1}{8}$ feet by $6\frac{1}{2}$ feet. If Casey has painted half of the wall, how many square feet does she still need to paint?
- A. $3\frac{3}{8}$ square feet
 - B. $9\frac{5}{8}$ square feet
 - C. $10\frac{5}{32}$ square feet
 - D. $20\frac{5}{6}$ square feet

77. The table below shows the grams of protein found in different ounces of tuna.

Tuna	Protein
3 ounces	21 grams
5 ounces	35 grams
7 ounces	49 grams

How many grams of protein would be found in 12 ounces of tuna?

- A. 54
 - B. 63
 - C. 77
 - D. 84
78. What is the range of the set of data used to create this box plot?



- A. 4
- B. 6
- C. 8
- D. 10