

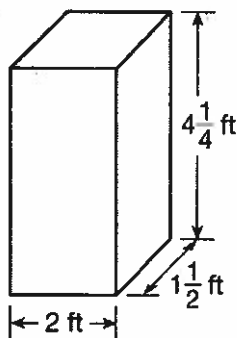
Section 1

Questions 1–5 are to be solved without the use of a calculator.

1. A picture is hanging in a rectangular frame that is $\frac{2}{3}$ foot wide. The framed picture covers an area of $\frac{5}{9}$ square foot on the wall. How long is the frame?
 - A. $\frac{10}{27}$ foot
 - B. $\frac{5}{6}$ foot
 - C. $1\frac{1}{5}$ feet
 - D. $1\frac{2}{9}$ feet
2. Multiply: 10.02×9.15
 - A. 916.83
 - B. 93.33
 - C. 91.683
 - D. 91.582
3. Mr. Chan pays \$8 to fill a 2-gallon can with gas for his lawn mower. At this rate, how much will Mr. Chan pay to put 13 gallons of gas in his car?
 - A. \$104.00
 - B. \$52.00
 - C. \$26.00
 - D. \$3.25



4. The amount of money, in dollars, that Paul earns is represented by the expression $15x + 10$, where x is the number of hours he works. How much does Paul earn when he works for 8 hours?
- A. \$25
B. \$95
C. \$120
D. \$130
5. What is the volume of the rectangular prism shown below?



- A. $7\frac{3}{4}$ cubic feet
B. $8\frac{1}{8}$ cubic feet
C. $12\frac{3}{4}$ cubic feet
D. $13\frac{1}{2}$ cubic feet

GO ON 

A calculator is permitted for use in solving questions 6–76.

6. The table below shows average annual incomes, in thousands of dollars, in the United States, from 2007 to 2012.

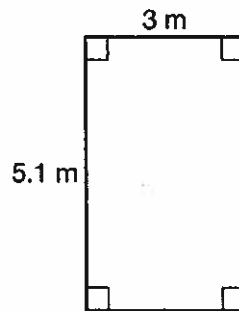
| Year | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|-----------------------|------|------|------|------|------|------|
| Income (thousands \$) | 40 | 41 | 41 | 42 | 43 | 44 |

What is the mean income?

- A. \$41,000
B. \$41,500
C. \$41,833
D. \$42,000
7. Which equation shows the value of 5 cubed?
- A. $3^5 = 243$
B. $5^3 = 125$
C. $3(5) = 15$
D. $5^3 = 15$
8. Two numbers have the same greatest common factor as 27 and 36 have. Which two numbers could they be?
- A. 18 and 45
B. 9 and 12
C. 12 and 18
D. 45 and 90

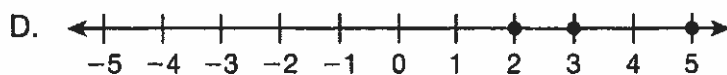
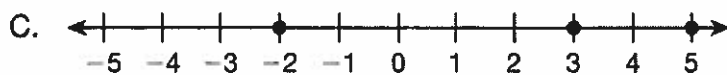
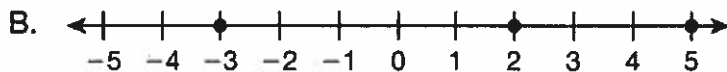
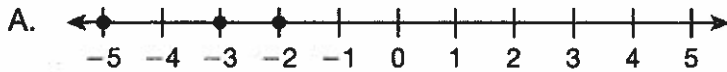
GO ON 

9. The figure below shows the shape and size of the garden Gan planted.



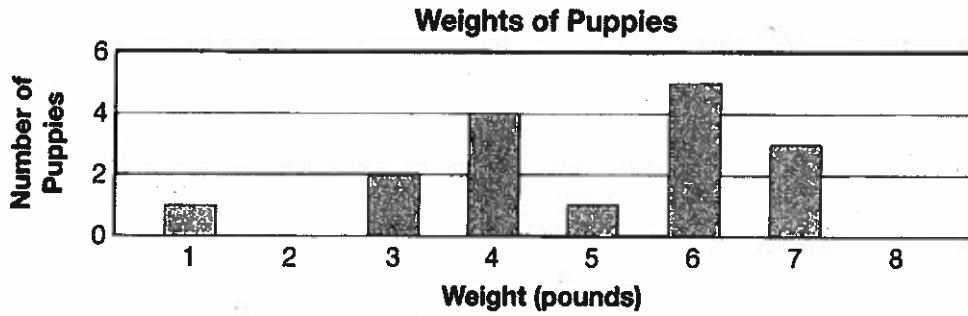
What is the area of Gan's garden?

- A. 8.1 square meters
 - B. 9 square meters
 - C. 15.3 square meters
 - D. 16.2 square meters
10. Which shows the numbers -3 , 2 , and 5 plotted correctly on the number line?



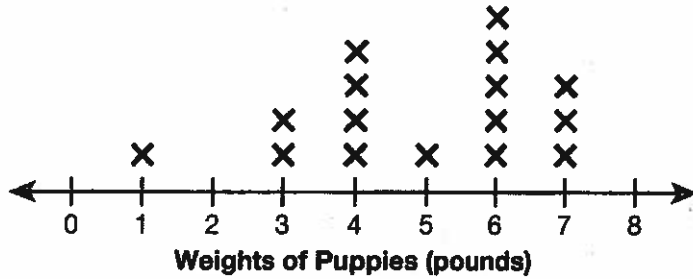
GO ON

11. A volunteer at an animal rescue center measured the weights of 16 puppies to the nearest pound. The results are shown in the bar graph below.

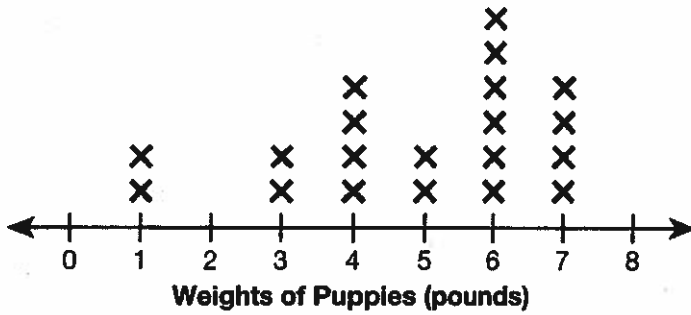


Which line plot displays the same data shown in the bar graph?

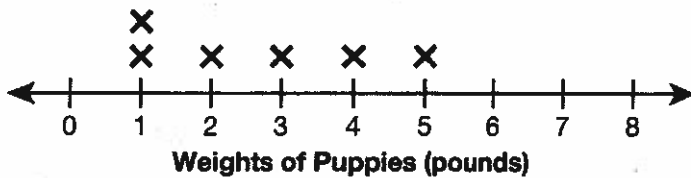
A.



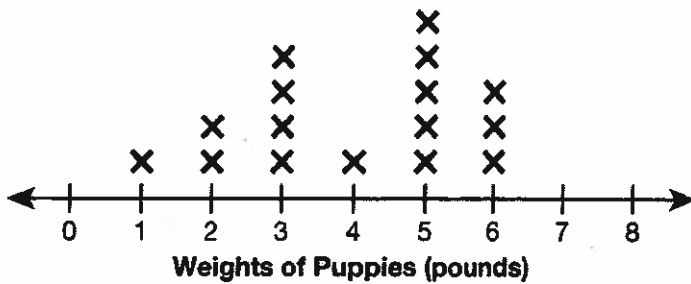
B.



C.



D.



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12. Yesterday Sarah played basketball for m minutes. Today she played for ten less than three times the number of minutes she played yesterday. Which expression represents the number of minutes Sarah played basketball today?

A. $10 - 3m$
B. $3m - 10$
C. $m - 3(10)$
D. $3(m - 10)$

13. The elevation of San Diego, California is 0 feet. The elevation of New Orleans, Louisiana is -7 feet. Which statement is **true**?

A. San Diego is at sea level, and New Orleans is below sea level.
B. San Diego is above sea level, and New Orleans is below sea level.
C. Both San Diego and New Orleans are below sea level.
D. Both San Diego and New Orleans are above sea level.

14. First, Jamal wrote the expression shown below.

$$3 + 5a$$

Then he wrote another expression by doubling the coefficient but using the same constant. What other expression did Jamal write?

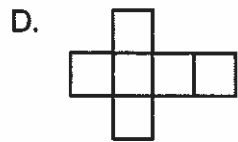
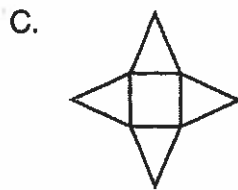
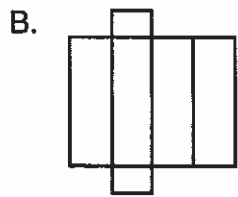
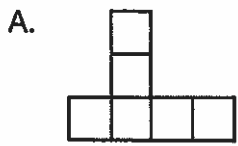
A. $6 + 5a$
B. $6 + 10a$
C. $3 + 10a$
D. $2(3 + 5a)$

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15. A square is drawn on a coordinate plane. Its vertices are located at $(-4, -2)$, $(-4, 4)$, $(2, -2)$, and $(2, 4)$. What is the area of the square?
- A. The area of the square is 36 square units because its side length is 6 units.
 - B. The area of the square is 24 square units because its side length is 6 units.
 - C. The area of the square is 8 square units because its side length is 2 units.
 - D. The area of the square is 4 square units because its side length is 2 units.
16. Which expression is equivalent to $4(3 + b)$?
- A. $7 + b$
 - B. $12b$
 - C. $12 + b$
 - D. $12 + 4b$
17. A gain of seven yards in football is represented by 7. What number represents a loss of seven yards?
- A. 0
 - B. 7
 - C. $-(-7)$
 - D. -7



18. Which net could be folded to make a cube?



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19. At the county fair, 35 Dutch rabbits and 21 Flemish Giant rabbits are displayed. Which statement about the rabbits at the fair is **true**?
- A. The ratio of Dutch rabbits to Flemish Giant rabbits is 7 to 3.
 - B. There are 5 Flemish Giant rabbits for every 3 Dutch rabbits.
 - C. The ratio of Dutch rabbits to all rabbits is 5:8.
 - D. The ratio of Flemish Giant rabbits to all rabbits is $\frac{8}{3}$.
20. Mateo is comparing the locations of integers on a number line. Which is a **true** statement that he could have made?
- A. The point for 2 is farther from 0 than the point for -7 because $|2| > |-7|$.
 - B. The point for -3 is to the left of the point for -5 because $|-3| < |-5|$.
 - C. The points for 4 and -4 are located at the same place because $|4| = |-4|$.
 - D. The points for -5 and 5 are the same distance from 0 because $|-5| = |5|$.
21. Tara studies for 25 minutes each day. Let s represent total studying time and d represent time in days. Which equation could Tara use to relate her total studying time to the number of days she studies?
- A. $d = 25s$
 - B. $s = \frac{25}{d}$
 - C. $s = 25 + d$
 - D. $s = 25d$



22. The table below describes data collected in a survey of sixth graders at one school.

**Hours Students Spend
Studying Per Week**

| | |
|--------|------|
| Range | 12.5 |
| Mean | 6.82 |
| Median | 5 |
| Mode | 5 |

What does this information tell you about the time the sixth graders spend studying?

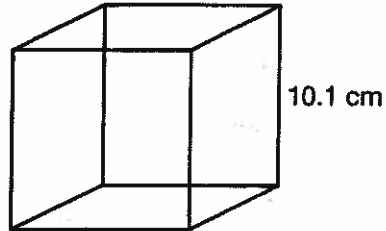
- A. Because the mean is greater than the median, the data shows that some students spend an unusually long time studying.
 - B. Because the mean is greater than the median, the data shows that some students spend an unusually short time studying.
 - C. Because the range is so wide, the data shows that the study times are evenly distributed.
 - D. Because the median and the mode are equal, the data shows that very few students participated in the survey.
23. Which number(s) in the set make the equation true?

$$2x - 7 = 3; \{2, 3, 5, 7\}$$

- A. 2, 3, 7
- B. 3, 5
- C. 3
- D. 5

GO ON 

24. The figure shows the dimensions of the cube-shaped box Amy uses to hold her rings. What is the surface area of Amy's box?



- A. 1030.3 square centimeters
- B. 612.06 square centimeters
- C. 600 square centimeters
- D. 408.04 square centimeters



25. For a science project, Eva measured outside temperatures at the same time for five days. Her results are shown in the table below.

Daily Temperatures at Noon

| Day | Monday | Tuesday | Wednesday | Thursday | Friday |
|------------------|--------|---------|-----------|----------|--------|
| Temperature (°C) | -2.4 | -3.8 | 1.5 | 2.4 | -1.1 |

- A. Eva said that it was warmer on Friday than it was on Monday. Was she correct? Explain your reasoning.

- B. Which day was coldest? Use a number line to verify your answer.



GO ON 

25. **Continued.** Please refer to the previous page for task explanation.

C. How are the temperatures for Monday and Thursday the same? How are they different?

ASSESSMENT 1

D. Write an equation that shows how Monday's and Thursday's temperatures are the same.

GO ON 

26. Elevators have safety limits for how much weight they can lift. The elevator at the Terrace Hotel can hold up to 2,100 pounds.

A. Write an equation or inequality that represents the allowable weight on the elevator at the Terrace Hotel. Explain your reasoning.

B. Graph the solution to the equation or inequality that you wrote in Part A on a number line. Explain how your graph represents the solution.



GO ON 