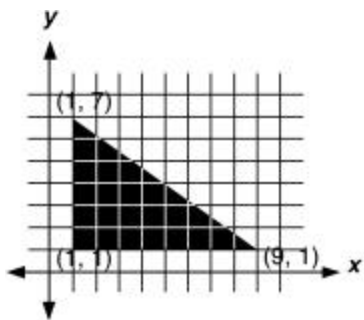


DIRECTIONS

Read each of the questions below and then decide on the BEST answer. There are a lot of different kinds of questions, so read each question carefully before marking an answer on your answer sheet.

1

What is the area of the shaded triangular region?



- A. 10 units²
- B. 24 units²
- C. 31.5 units²
- D. 48 units²

2

What is the greatest common factor of 12 and 18?

- A. 1
- B. 3
- C. 6
- D. 36

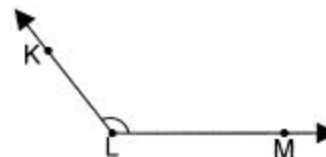
3

A box contains 26 slips of paper, each representing one letter of the alphabet. You select one slip at random and choose an "A." What is the probability the next selection is a vowel, if the 1st slip is not placed back into the box?

- A. $\frac{5}{26}$
- B. $\frac{4}{25}$
- C. $\frac{2}{13}$
- D. $\frac{1}{5}$

4

Which of the following terms most accurately describes $\angle KLM$?

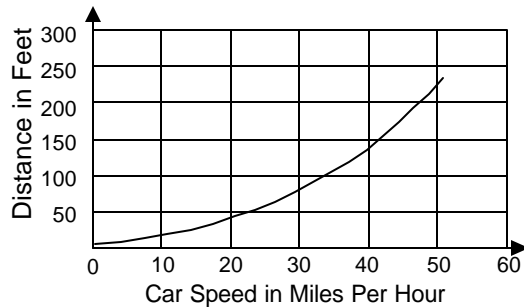


- A. Acute angle
- B. Right angle
- C. Supplementary angle
- D. Obtuse angle

Mathematics ▼

5

A car is traveling 30 miles per hour. According to this graph showing stopping distances, about how far will it travel after applying the brakes?



- A. 16 feet
- B. 45 feet
- C. 55 feet
- D. 80 feet

6

Jane invests \$3,000 in a savings account earning 5% annual interest. Find the total value of the investment after 2 years to the nearest dollar.

- A. \$3,010
- B. \$3,075
- C. \$3,100
- D. \$3,308

7

A factory makes steel plates that are $30 \text{ mm} \pm 2 \text{ mm}$ thick. These plates are in stacks of 100. Which of these is most likely the height of one stack?

- A. 2.4 meters
- B. 3.1 meters
- C. 4.0 meters
- D. 4.5 meters

8

Which of these could be Doris' age if the median of the ages is 15?

Name	Age
Scott	18
Kim	13
Lynn	16
Doris	?
Phil	15

- A. 13
- B. 16
- C. 17
- D. 18

9

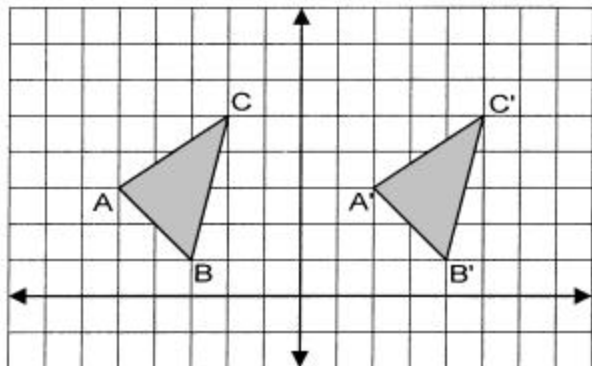
Solve for y :

$$\frac{4}{7}y = 4$$

- A. 4
- B. $4\frac{4}{7}$
- C. $4\frac{7}{4}$
- D. 7

10

In the illustration, triangle $A'B'C'$ is formed by adding seven units to the x -coordinate of each vertex of triangle ABC . The best term for describing triangle $A'B'C'$ is



- A. a flip of $\triangle ABC$.
- B. a reflection of $\triangle ABC$.
- C. a rotation of $\triangle ABC$.
- D. congruent to $\triangle ABC$.

11

In one month Melissa earned \$40 for babysitting. The next month she earned \$44. By what percent did her earnings increase?

- A. 9%
- B. 10%
- C. 91%
- D. 110%

12

Decide which one of these statements is true about the length of a line that measures 20.5 ± 0.2 mm.

- A. It could be 20.6 mm long.
- B. It could be a little less than 20.3 mm long.
- C. It is exactly 20.5 mm long.
- D. The measurement was probably made using a meter stick.

13

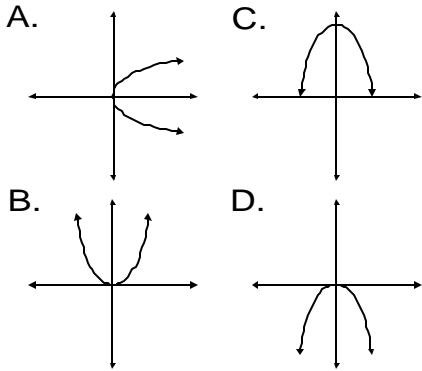
Which of the following sets of data has a range of 12?

- A. {21, 23, 23, 29, 33}
- B. {10, 16, 30, 32}
- C. {9, 10, 10, 19}
- D. {7, 8, 12, 12, 12, 13}

Mathematics ▼

14

Which graph best fits the equation $y = x^2$?



15

Four stores are having sales on the same brand of cereal. Which of the advertised prices below is the best buy?

- A. A 12-ounce package for \$1.69
- B. \$2.40 a pound
- C. Four 20-ounce packages for \$12.00
- D. Three 20-ounce packages for \$7.80

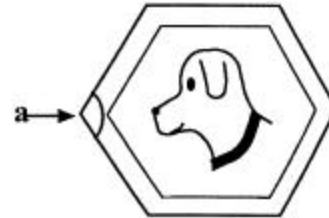
16

What are the coordinates of the vertex for the graph of the function $y = 3x^2$?

- A. (0, 0)
- B. (-2, 12)
- C. (2, 12)
- D. (4, 48)

17

You want to make a hexagonal picture frame for a picture of your dog. The hexagon is to be a regular hexagon. What degree or angle would you need to make “a” when cutting your wood for the six equal pieces to fit together?



- A. 60°
- B. 90°
- C. 120°
- D. 135°

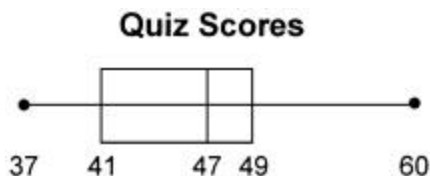
18

If the length of the sides of a cube are doubled, what is the effect on the surface area of the cube? It becomes

- A. two times as great.
- B. three times as great.
- C. four times as great.
- D. eight times as great.

19

Use the box and whisker plot to determine which statements are true about the quiz score distribution.



- I. Half the scores are above 47.
- II. Half the scores are between 41 and 49.
- III. The high score was 60.

- A. I only
- B. II only
- C. I, II, and III
- D. I and II only

20

One formula for determining the interest on a savings account is $i = prt$, where

i is total interest,

p is principal,

r is interest rate, and

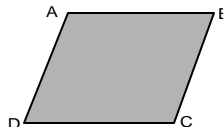
t is time.

If the interest rate is doubled and the principal is doubled while the time remains the same, the interest earned

- A. stays the same.
- B. doubles.
- C. triples.
- D. quadruples.

21

Given that ABCD is a parallelogram, what conclusion about ABCD can be made?



- A. All the sides of ABCD are equal in length.
- B. $\angle A$ and $\angle C$ are supplementary angles.
- C. $\angle A$ and $\angle B$ are supplementary angles.
- D. $\angle D$ and $\angle B$ are complementary angles.

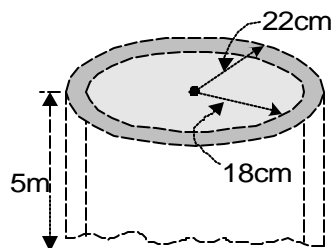
22

Which of these is in scientific notation?

- A. 17×10^3
- B. 0×10^{-4}
- C. 11.5×10^7
- D. 6.4×10^{-8}

23

What is the volume of water that can be held by the section of pipe shown?



- A. $5,086 \text{ cm}^3$
- B. $7,598 \text{ cm}^3$
- C. $508,680 \text{ cm}^3$
- D. $759,880 \text{ cm}^3$

Mathematics ▼

24

Use the given information to predict the population of Gotham by the year 2000.

POPULATION OF GOTHAM

<u>Year</u>	<u>Population</u>
1950	2,000
1960	2,060
1970	2,180
1980	2,360

- A. 2,600
- B. 2,900
- C. 2,980
- D. 3,000

25

If the point $(3, -1)$ is reflected over the x -axis, the coordinates of its image are _____.

- A. $(3, 1)$
- B. $(-3, -1)$
- C. $(-3, 1)$
- D. $(1, -3)$