

Name.....Period.....

The first five terms in a geometric sequence are shown below.

4, 12, 36, 108, 324, ...

What is the next term in the sequence?

- A. 432
- B. 648
- C. 972
- D. 1296

Which of the following is equivalent to the expression below?

$$x^2 + 7x - 60$$

- A.  $(x + 12)(x - 5)$
- B.  $(x + 10)(x - 6)$
- C.  $(x + 15)(x - 4)$
- D.  $(x + 20)(x - 3)$

What are the solutions of the equation below?

$$(x - 2)(x + 9) = 0$$

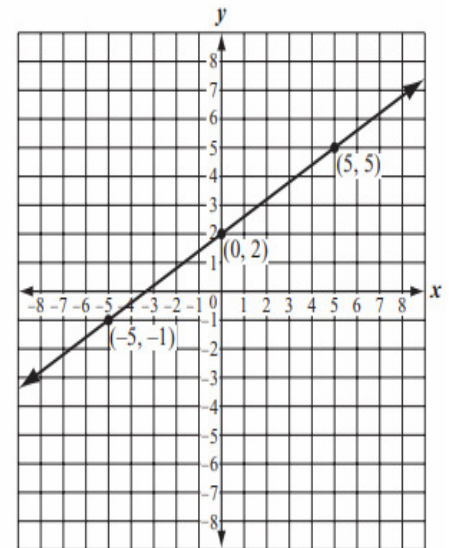
- A.  $x = -2$ ;  $x = -9$
- B.  $x = -2$ ;  $x = 9$
- C.  $x = 2$ ;  $x = -9$
- D.  $x = 2$ ;  $x = 9$

Which of the following is equivalent to the expression below?

$$(x + 3)(x + 4)$$

- A.  $x^2 + 7$
- B.  $x^2 + 12$
- C.  $x^2 + 3x + 7$
- D.  $x^2 + 7x + 12$

What is the slope of the line graphed below?



Two families buy refreshments at a concession stand.

- Each drink costs  $d$  dollars.
- Each snack costs  $s$  dollars.
- The Blake family buys 3 drinks and 2 snacks for \$12.
- The Reese family buys 2 drinks and 4 snacks for \$16.

What is the cost of one **drink** at the concession stand?

- A. \$2
- B. \$3
- C. \$4
- D. \$5

What is the slope of the line represented by the equation below?

$$4x + 5y = 10$$

- A.  $\frac{4}{5}$
- B.  $-\frac{4}{5}$
- C. 4
- D. -4

Brandon plans to rent a truck. The cost to rent the truck is \$30 for the first four hours plus \$10 for each additional hour. He can spend no more than \$60.

What is the maximum number of hours for which Brandon can rent the truck?

- A. 3
- B. 4
- C. 6
- D. 7

2.

A computer software package is sold to small-business clients. The total cost of the software package is \$500 for the first 10 computers on which the software is installed, plus \$20 for installation on each additional computer.

Which statement best describes the function that models the relationship between the number of computers on which the software is installed and the cost of the software?

- A. It is a constant linear function for 10 or fewer computers and an exponential function for more than 10 computers.
- B. It is an increasing linear function for 10 or fewer computers and an exponential function for more than 10 computers.
- C. It is a constant linear function for 10 or fewer computers and an increasing linear function for more than 10 computers.
- D. It is an increasing linear function for 10 or fewer computers and a constant linear function for more than 10 computers.