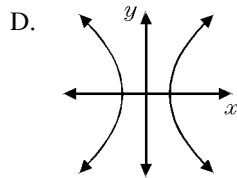
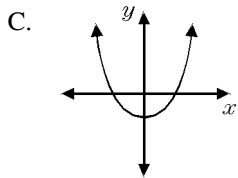
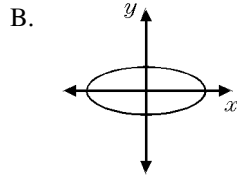
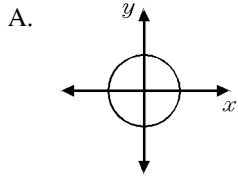


# Equations/Graphs Review

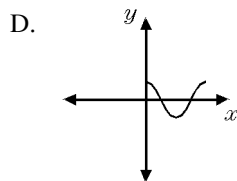
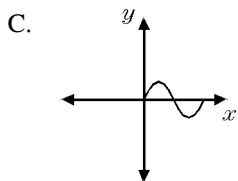
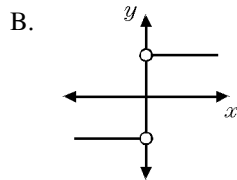
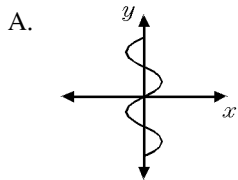
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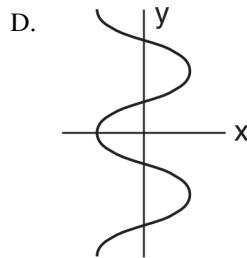
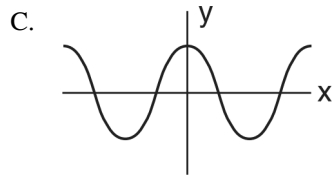
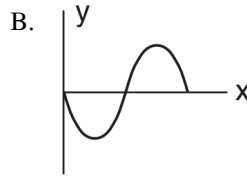
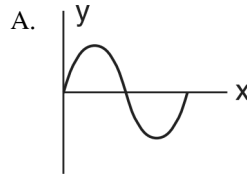
1. Which graph illustrates a quadratic relation whose domain is all real numbers?



2. Which diagram shows a relation that is *not* a function?



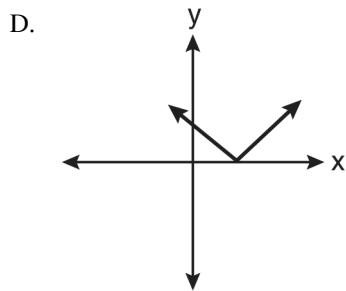
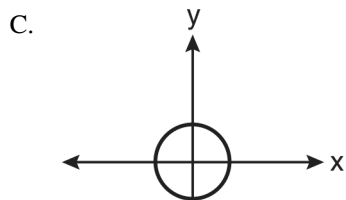
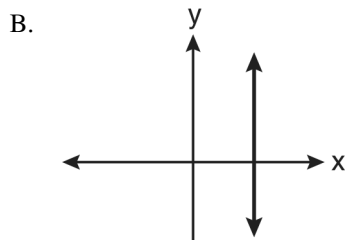
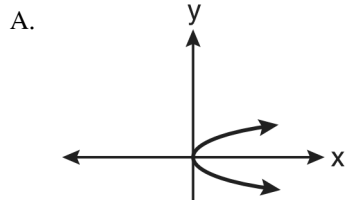
3. Which graph does *not* represent a function?



4. If the domain of  $f(x) = 2x + 3$  is  $\{-3 < x \leq 0\}$ , which number is *not* in the range?

- A. -1      B. 0      C. 3      D. 6

5. Which graph represents a function?



6. The height of a swimmer's dive off a 10-foot platform into a diving pool is modeled by the equation  $y = 2x^2 - 12x + 10$ , where  $x$  represents the number of seconds since the swimmer left the diving board and  $y$  represents the number of feet above or below the water's surface. What is the farthest depth below the water's surface that the swimmer will reach?

- A. 6 feet                      B. 8 feet  
C. 10 feet                     D. 12 feet

7. What is an equation of the axis of symmetry of the graph of the equation  $y = 2x^2 - 3x - 1$ ?

- A.  $x = \frac{3}{2}$                       B.  $y = -\frac{3}{2}$   
C.  $x = \frac{3}{4}$                       D.  $y = \frac{3}{4}$

8. Which is an equation of the axis of symmetry of the graph of the equation  $y = 2x^2 - 5x + 3$ ?

- A.  $x = -\frac{5}{2}$                       B.  $x = \frac{5}{2}$   
C.  $x = -\frac{5}{4}$                       D.  $x = \frac{5}{4}$

9. If  $dx - 2 = h$ , then  $x$  is equal to

- A.  $h + \frac{2}{d}$     B.  $\frac{h-2}{d}$     C.  $\frac{h+2}{d}$     D.  $\frac{h}{d} + 2$

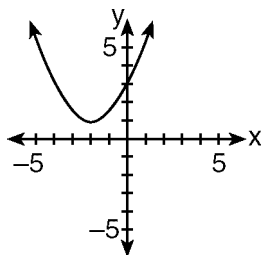
10. In the equation  $A = p + prt$ ,  $t$  is equivalent to

- A.  $\frac{A - pr}{p}$                       B.  $\frac{A - p}{pr}$   
 C.  $\frac{A}{pr} - p$                       D.  $\frac{A}{p} - pr$

11. The formula for the volume of a pyramid is  $V = \frac{1}{3}Bh$ . What is  $h$  expressed in terms of  $B$  and  $V$ ?

- A.  $h = \frac{1}{3}VB$                       B.  $h = \frac{V}{3B}$   
 C.  $h = \frac{3V}{B}$                       D.  $h = 3VB$

12. The accompanying diagram shows a parabola.



Which statement is *not* true?

- A. The equation of the axis of symmetry is  $x = -2$ .  
 B. The parabola has a minimum point.  
 C. The turning point of the parabola is  $(-2, 1)$ .  
 D. The parabola has two  $x$ -intercepts.

13. How is the graph of  $y = x^2 + 4x + 3$  affected when the coefficient of  $x^2$  is changed to a smaller positive number?

- A. The graph becomes wider, and the  $y$ -intercept changes.  
 B. The graph becomes wider, and the  $y$ -intercept stays the same.  
 C. The graph becomes narrower, and the  $y$ -intercept changes.  
 D. The graph becomes narrower, and the  $y$ -intercept stays the same.

14. The equation  $P = 2L + 2W$  is equivalent to

- A.  $L = \frac{P - 2W}{2}$                       B.  $L = \frac{P + 2W}{2}$   
 C.  $2L = \frac{P}{2W}$                       D.  $L = P - W$

15. The equation  $W = 120I - 12I^2$  represents the power ( $W$ ), in watts, of a 120-volt circuit having a resistance of 12 ohms when a current ( $I$ ) is flowing through the circuit. What is the maximum power, in watts, that can be delivered in this circuit?

16. The height,  $h$ , in feet, a ball will reach when thrown in the air is a function of time,  $t$ , in seconds, given by the equation  $h(t) = -16t^2 + 30t + 6$ . Find, to the *nearest tenth*, the maximum height, in feet, the ball will reach.