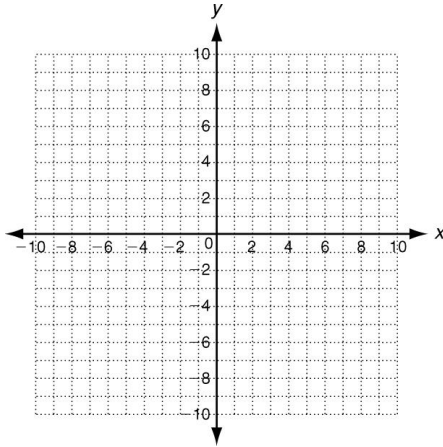


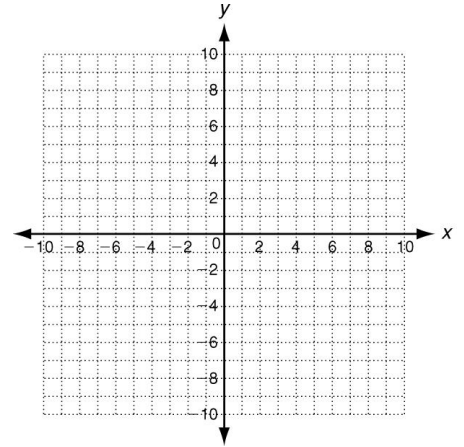
**LESSON****Practice B****9-5****Solving Quadratic Equations by Graphing**

Solve each quadratic equation by graphing. Set each equation equal to zero before making your table. Write your solutions as "x= " or "no solution".

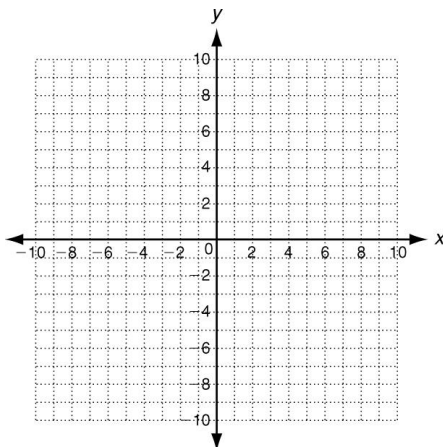
1.  $x^2 - 6x + 9 = 0$



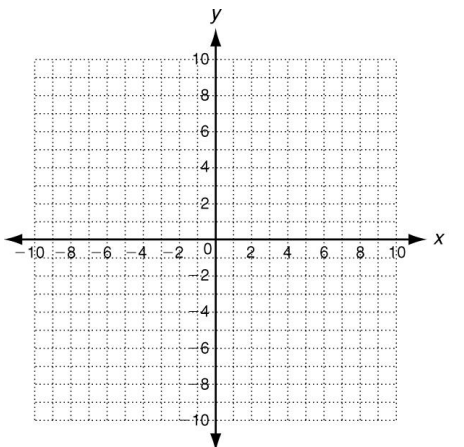
2.  $x^2 = 4$



3.  $2x^2 + 4x = 6$



4.  $x^2 = 5x - 10$

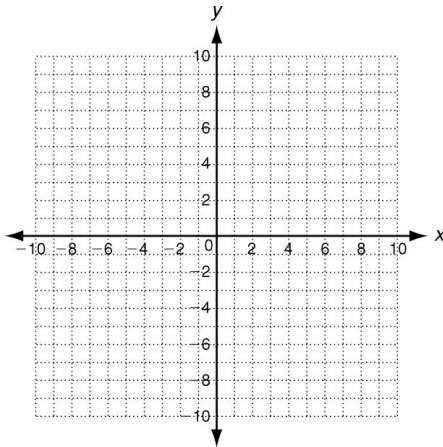


## LESSON

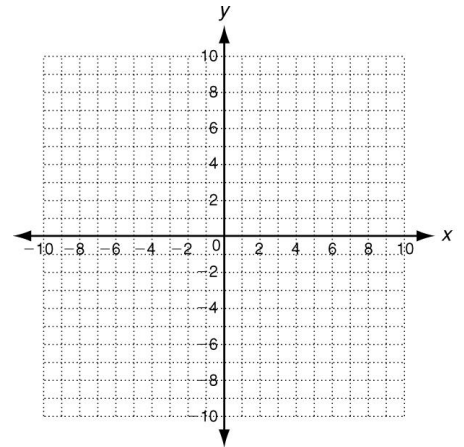
**Practice C****9-5****Solving Quadratic Equations by Graphing**

Solve each quadratic equation by graphing. Set each equation equal to zero before making your table. Write your solutions as "x= " or "no solution".

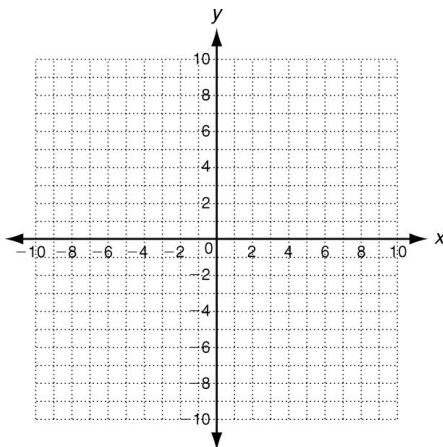
1.  $x^2 - 9 = 0$



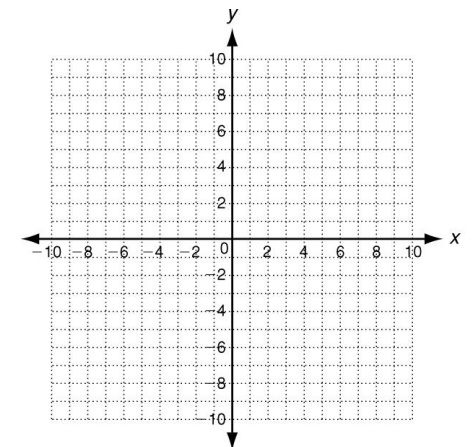
2.  $-x^2 - 10x = 25$



3.  $0 = x^2 + 6$



4.  $3 + x^2 = 3x^2 - x$

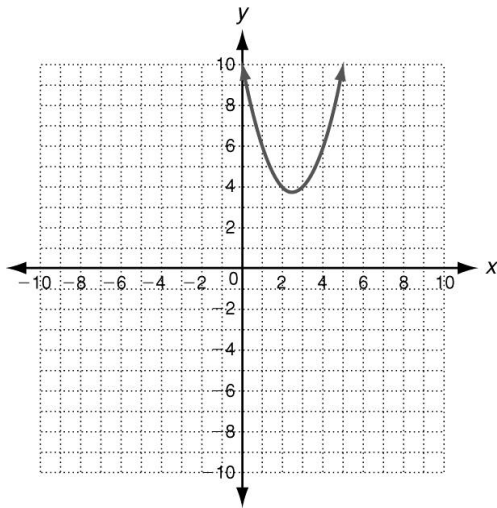


Name \_\_\_\_\_

Date \_\_\_\_\_

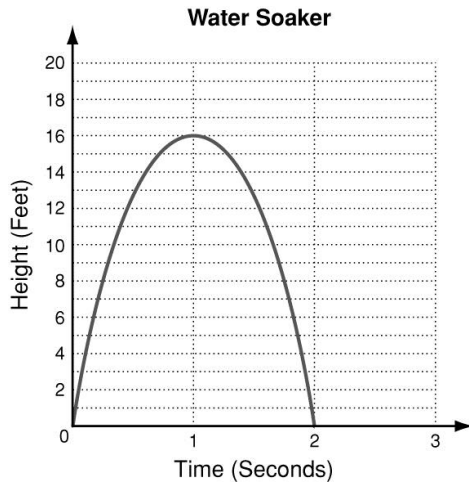
Period \_\_\_\_\_

4.



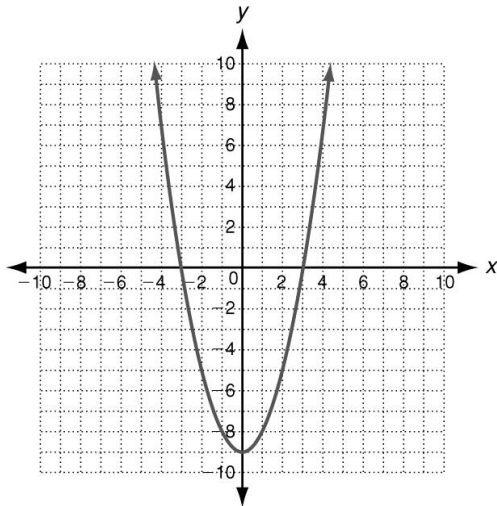
no real solution

5. 2 seconds



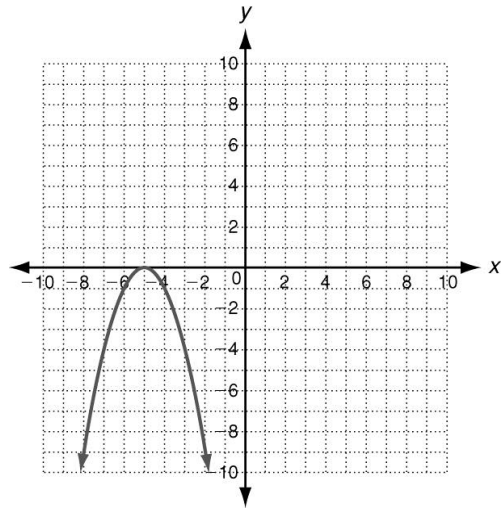
**Practice C**

1.



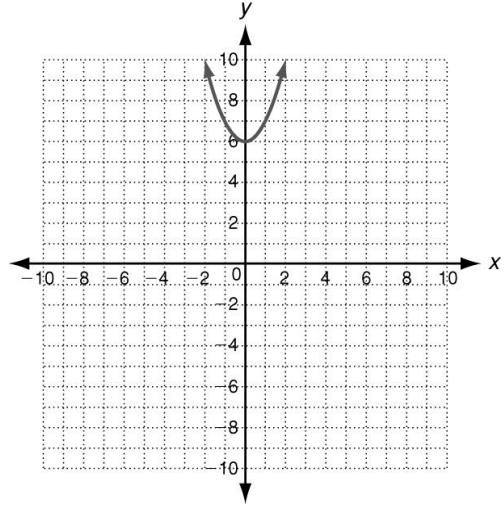
$x = 3$  or  $x = -3$

2.



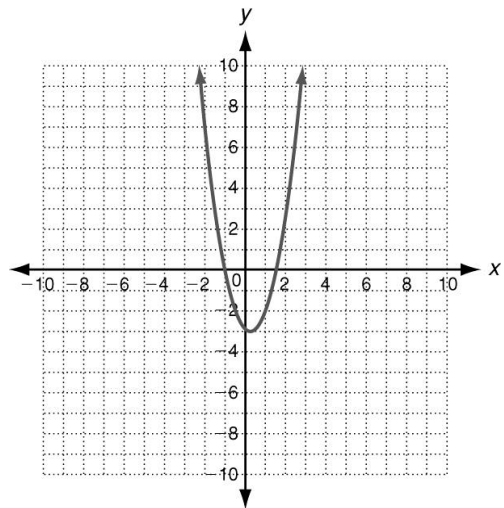
$x = -5$

3.



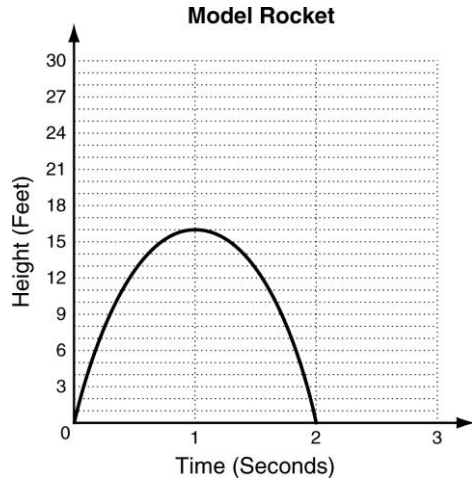
no real solution

4.



$x = \frac{3}{2}$  or  $x = -1$

5. 2 seconds



### Review for Mastery

- 0, -3;  $x = 0$   
 $3(0)^2 + 9(0)$ ; 0  
 $3(0) + 0$ ; 0  
 0; 0  
 $x = -3$   
 $3(-3)^2 + 9(-3)$ ; 0  
 $3(9) + (-27)$ ; 0  
 $27 + -27$ ; 0  
 0; 0
- 2;  $x = 2$   
 $(2)^2 - 4(2) + 4$ ; 0  
 $4 - 8 + 4$ ; 0  
 0; 0
- 0, 3;  $x = 0$   
 $-2(0)^2 + 6(0)$ ; 0  
 $-2(0) + 0$ ; 0  
 0; 0  
 $x = 3$   
 $-2(3)^2 + 6(3)$ ; 0  
 $-2(9) + 18$ ; 0  
 $-18 + 18$ ; 0  
 0; 0
- about 3.5 seconds
- about 24.5 seconds
- about 5.5 seconds

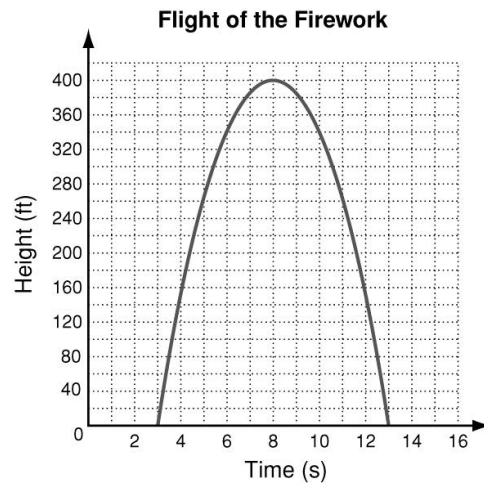
### Challenge

- 36 ft; Solve  $0 = -0.08x^2 + 2.88x$  by graphing on a graphing calculator. The zeros are 0 and 36.

- 6 ft; Solve  $13.5 = -0.08x^2 + 2.88x$  by graphing  $y = -0.08x^2 + 2.88x - 13.5$ . The zeros are approximately 6 and 30.
- yes; no; Two lanes require 24 ft, which is exactly the width that is taller than 13.5 ft. Three lanes require 36 ft; the cars in the outside lanes would hit the tunnel walls.
- 4 ft
- Yes; Evaluate  $y = -0.08x^2 + 2.88x$  when  $x = 4$  to find  $y = 10.24$ . Because an "average" pedestrian is shorter than 10 ft, the walkway will be tall enough.
- accept

### Problem Solving

1.



- 8 seconds; 400 feet
- $x = 3$ ;  $x = 13$
- The firework launches at 3s; The firework lands at 13s
- B
- D
- H

### Reading Strategies

- quadratic function
- $y = 5x^2 + 7x$ ;  $f(x) = 5x^2 + 7x$
- Because the graph may look like it intersects a point, but actually only come close to it.