

# Chapter 9

## Review

Solve by graphing.

1.  $x^2 - 2x + 3$

- a. First find the vertex.  $(1,2)$
- b. Find the x-intercepts.  $\text{None}$
- c. Find 2 other points.  $(2,3), (0,3)$
- d. Graph

Solve by using square roots.

$$2. 4x^2 = -16$$

No real solutions

$$3. 16(x - 2)^2 = 100$$

$$x = 4.5, -0.5$$

Solve by Completing the Square.

$$4. x^2 = 6x + 10$$

$$x = 3 \pm \sqrt{19}$$

$$5. 16 = x^2 - 16x - 20$$

$$x = 18, -2$$

7. Find the discriminant to determine how many times the graph of  $y = 4x^2 - 4x + 1$  intersects the  $x$  - axis.

$$\textit{discriminant} = 0$$

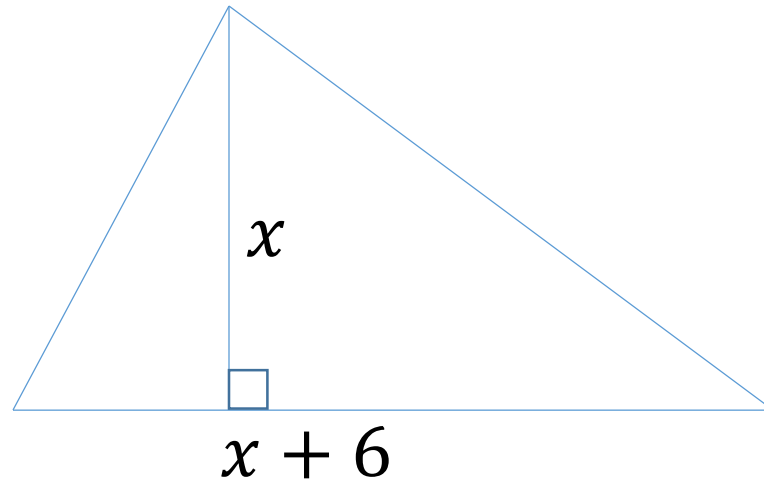
*1 solution*

Solve the System.

8.  $y = x^2 - 4x - 2$   
 $y = -4x + 2$

$(-2, 10), (2, -6)$

9. The area of the triangle is 36 square feet. Use a quadratic equation to find the length of the base.



$$x = 6$$

$$\text{length} = 12 \text{ ft}$$

10. A snowboarder leaves an 8-foot-tall ramp with an upward velocity of 28 feet per second. The function  $h = -16t^2 + 28t + 8$  gives the height  $h$ (in feet) of the snowboarder after  $t$  seconds. How long is the snowboarder in the air?

*2 seconds*