

# Chapter Test A

For use after Chapter 9

**Evaluate the expression.**

1.  $\sqrt{81}$
2.  $-\sqrt{100}$
3.  $\sqrt{b^2 - 4ac}$  when  $a = 3, b = 7, c = 2$
4.  $\sqrt{b^2 - 4ac}$  when  $a = 3, b = 8, c = 4$

**Solve the equation by finding square roots.**

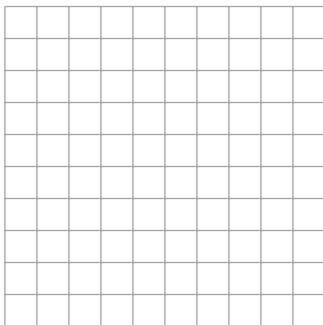
5.  $x^2 = 81$
6.  $x^2 = 49$

**Simplify the expression.**

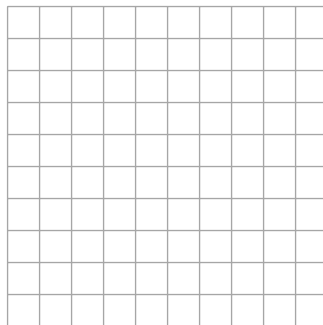
7.  $\sqrt{45}$
8.  $\sqrt{54}$
9.  $\sqrt{\frac{16}{25}}$
10.  $\sqrt{\frac{10}{32}}$

**Sketch the graph of the function. Label the vertex.**

11.  $y = 3x^2$



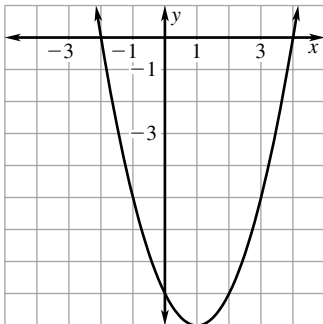
12.  $y = -x^2$



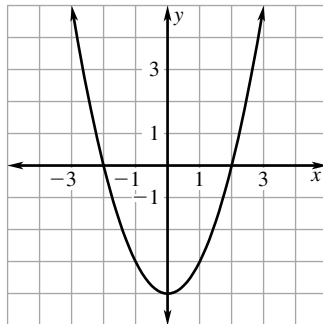
1. \_\_\_\_\_
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15. \_\_\_\_\_
16. \_\_\_\_\_

**Use the graph to identify the roots of the equation.**

13.  $y = x^2 - 2x - 8$



14.  $y = x^2 - 4$



**Use the quadratic formula to solve the equation.**

15.  $y = x^2 + x - 20$

16.  $y = x^2 - 5x + 6$

# Chapter Test A

For use after Chapter 9

Find the  $x$ -intercepts of the graph of the equation.

17.  $y = x^2 - 3x + 2$

18.  $y = x^2 - 1$

Decide how many solutions the equation has.

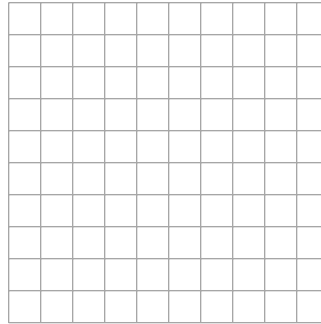
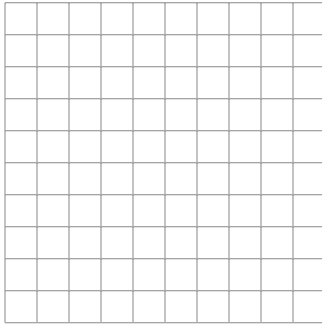
19.  $x^2 - 2x + 1 = 0$

20.  $x^2 + 3 = 0$

Sketch the graph of the inequality.

21.  $y \geq x^2$

22.  $y < x^2 - 3$



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- 18. \_\_\_\_\_
- 18. \_\_\_\_\_
- 19. \_\_\_\_\_
- 20. \_\_\_\_\_
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- 23. \_\_\_\_\_
- 24. \_\_\_\_\_
- 25. \_\_\_\_\_
- 26. \_\_\_\_\_

23. The revenue from selling  $x$  units of a product is given by  $y = -0.0002x^2 + 20x$ . How many units must be sold in order to have the greatest revenue? (Find the  $x$ -coordinate of the vertex of the parabola.)

Name the type of model that best fits the data.

