

Name \_\_\_\_\_

Date \_\_\_\_\_

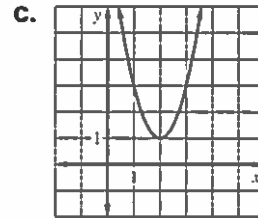
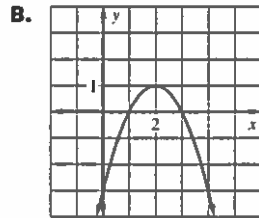
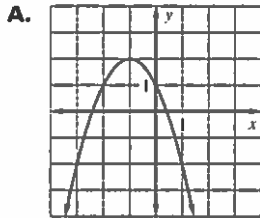
**LESSON**  
**4.2** **Practice**  
*For use with pages 245–251*

**Match the equation with its graph.**

1.  $y = 2(x - 2)^2 + 1$

2.  $y = -(x - 3)(x - 1)$

3.  $y = -(x + 1)^2 + 2$

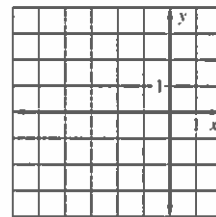
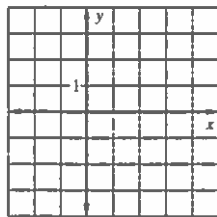
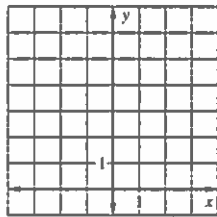


**Graph the function. Label the vertex and axis of symmetry.**

4.  $y = (x + 1)^2 + 3$

5.  $y = (x - 2)^2 - 1$

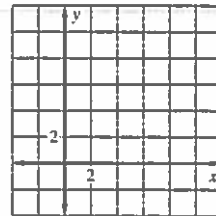
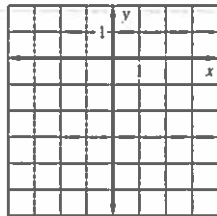
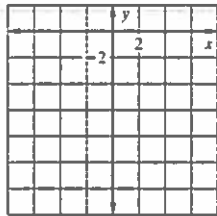
6.  $y = (x + 2)^2 - 3$



7.  $y = -2(x + 1)^2 - 4$

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

9.  $y = -(x - 4)^2 + 8$



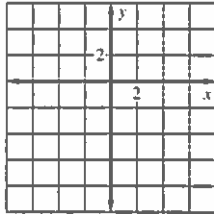
Name \_\_\_\_\_

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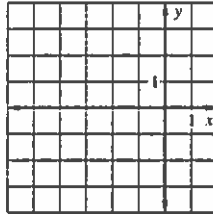
**LESSON**  
**4.2** **Practice** *continued*  
*For use with pages 245–251*

**Graph the function. Label the vertex, axis of symmetry, and  $x$ -intercepts.**

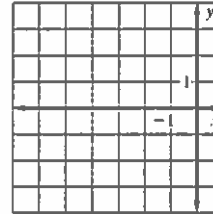
10.  $y = (x + 2)(x - 4)$



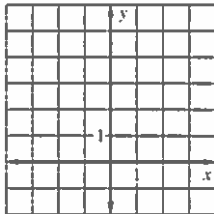
11.  $y = (x + 2)(x + 3)$



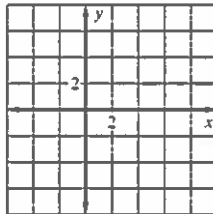
12.  $y = (x + 4)(x + 2)$



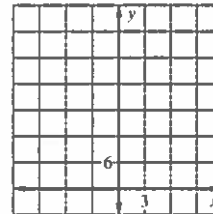
13.  $y = -(x - 3)(x + 1)$



14.  $y = 3(x - 1)(x - 4)$



15.  $y = -3x(x + 7)$



**Write the quadratic function in standard form.**

16.  $y = (x - 2)^2 + 6$

17.  $y = -2(x + 1)^2 + 3$

18.  $y = 3(x - 3)^2 - 12$

19.  $y = (x - 4)(x - 2)$

20.  $y = 4(x + 1)(x + 2)$

21.  $y = -3(x - 3)(x + 2)$

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LESSON  
4.2**Practice** *continued*  
For use with pages 245–251

Find the minimum value or the maximum value of the function.

22.  $y = (x - 6)^2 + 3$

23.  $y = -(x - 3)^2 - 4$

24.  $y = 3(x - 3)^2 - 3$

25.  $y = (x + 7)(x + 3)$

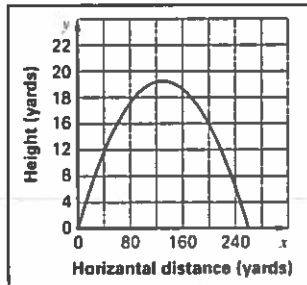
26.  $y = 2(x - 3)(x - 5)$

27.  $y = -(x - 1)(x + 4)$

28. **Visual Thinking** Use a graphing calculator to graph  $y = a(x - 2)(x - 6)$  where  $a = \frac{1}{2}$ , 1, and 4. Use the same viewing window for all three graphs. How do the graphs change as  $a$  increases?

In Exercises 29 and 30, use the following information.

**Golf** The flight of a particular golf shot can be modeled by the function  $y = -0.001x(x - 260)$  where  $x$  is the horizontal distance (in yards) from the impact point and  $y$  is the height (in yards). The graph is shown below.



29. How many yards away from the impact point does the golf ball land?
30. What is the maximum height in yards of the golf shot?