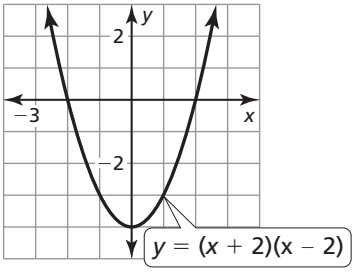
Name_____ Date _____

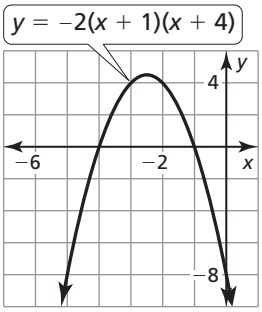
3.5 Practice A

In Exercises 1 and 2, find the *x*-intercepts and axis of symmetry of the graph of the function.

1.



2.



In Exercises 3–6, graph the quadratic function. Label the vertex, axis of symmetry, and *x*-intercepts. Describe the domain and range of the function.

3. $f(x) = (x + 3)(x - 1)$

4. $y = -(x - 5)(x + 1)$

5. $f(x) = 2x^2 - 16x$

6. $y = x^2 + 8x + 7$

In Exercises 7–10, find the zero(s) of the function.

7. $y = -4(x - 5)(x - 9)$

8. $f(x) = \frac{1}{4}(x + 3)(x - 2)$

9. $g(x) = x^2 - 7x - 30$

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

In Exercises 11–14, use zeros to graph the function.

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

12. $f(x) = -2(x + 2)(x + 6)$

13. $g(x) = x^2 - 10x + 21$

14. $y = x^2 - x - 6$

In Exercises 15–19, write a quadratic function in standard form whose graph satisfies the given conditions.

15. vertex: $(-5, 4)$

16. x-intercepts: 2 and 7

17. passes through $(-3, 0)$, $(1, 0)$, and $(-1, 8)$

18. axis of symmetry: $x = -3$

19. passes through: $(-4, 0)$ and $(4, 0)$