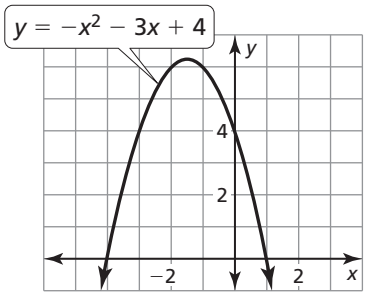
Name _____ Date _____

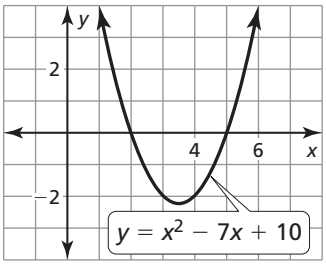
4.2 Practice A

In Exercises 1 and 2, use the graph to solve the equation.

1. $-x^2 - 3x + 4 = 0$



2. $x^2 - 7x + 10 = 0$



In Exercises 3–5, write the equation in standard form.

3. $3x^2 = 15$

4. $-x^2 = -14$

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

In Exercises 6–11, solve the equation by graphing.

6. $x^2 + 3x = 0$

7. $x^2 + 2x + 1 = 0$

8. $x^2 - 3x + 6 = 0$

9. $x^2 - 4x - 5 = 0$

10. $-x^2 = 7x + 18$

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

12. The height y (in feet) of a toss in bocce ball can be modeled by $y = -x^2 + 4x$, where x is the horizontal distance (in feet).

a. Interpret the x-intercepts of the graph of the equation.

b. How far away does the bocce ball land on the ground?

In Exercises 13–15, solve the equation by using Method 2 from Example 3.

13. $x^2 = 4x + 12$

14. $8x - 15 = x^2$

15. $x^2 + 9x = 10$

In Exercises 16–19, graph the function. Approximate the zeros of the function to the nearest tenth when necessary.

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

17. $f(x) = -x^2 + 8x - 6$

18. $y = \frac{1}{3}x^2 + 2x - 4$

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

20. The area (in square feet) of an x-foot-wide sidewalk can be modeled by $y = -0.002x^2 + 0.006x$. Find the width of the sidewalk to the nearest foot.

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