

Practice: 8-3 Finding x -Intercepts Worksheet #1

Find the x -intercepts of each parabola.

1. $y = x^2 - 6x + 9$

2. $y = x^2 + x - 9$

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

4. $y = 3x^2 - 3$

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

6. $y = 4x^2 + 11x + 6$

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

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

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

9. $y = x^2 + 4x + 3$

10. $y = -x^2 - 4x - 4$

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

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

13. $y = x^2 - 4$

14. You and a friend are hiking in the mountains. You want to climb a ledge that is 20 feet high. The height of the grappling hook you throw is given by the function

$$h = -16t^2 + 38t + 5.$$

We already know you can throw it high enough, but what if you miss? After how many seconds will the hook land back where you are standing?