

4-7: Transformations of Quadratic Graphs (Practice)

Write each equation in vertex form. Then identify the vertex, axis of symmetry, and direction of opening.

1. $y = -6x^2 - 24x - 25$

4. $y = 2x^2 + 12x + 18$

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

Graph each function.

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

3. $y = -4x^2 + 8x$

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

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

10. **BASEBALL** The height h of a baseball t seconds after being hit is given by $h(t) = -16t^2 + 80t + 3$. What is the maximum height that the baseball reaches, and when does this occur?

8. Write an equation for a parabola with vertex at $(1, 3)$ that passes through $(-2, -15)$.

9. Write an equation for a parabola with vertex at $(-3, 0)$ that passes through $(3, 18)$.