

**DIRECTIONS:** Write a quadratic equation in vertex form which has a graph with the given vertex and passes through the given point.

1. Vertex:  $(2, -1)$   
Point:  $(4, 3)$

2. Vertex:  $(-4, 6)$   
Point:  $(-1, 9)$

3. Vertex:  $(4, 5)$   
Point:  $(8, -3)$

4. Vertex:  $(0, 0)$   
Point:  $(-2, -12)$

**DIRECTIONS:** Find a quadratic equation with integral coefficients having the given roots/zeros/ $x$ -intercepts.

5.  $-3, 1$

6.  $\frac{3}{2}, -\frac{1}{2}$

7.  $-\frac{\sqrt{5}}{2}, \frac{\sqrt{5}}{2}$

8.  $2 + \sqrt{7}, 2 - \sqrt{7}$

9.  $\frac{-2+\sqrt{5}}{4}, \frac{-2-\sqrt{5}}{4}$

10.  $2i\sqrt{2}, -2i\sqrt{2}$

11.  $4 + 2i, 4 - 2i$

12.  $-2 + i\sqrt{7}, -2 - i\sqrt{7}$

13.  $\frac{2+i\sqrt{3}}{2}, \frac{2-i\sqrt{3}}{2}$