

8.6 Quadratic Functions In Vertex Form

Date _____

Identify the vertex and the axis of symmetry for each equation then sketch the graph of each function on separate graph paper. For question 1-7, you must change each equation to vertex form by completing the square.

1) $y = x^2 - 2x - 1$

2) $y = x^2 - 6x + 8$

3) $y = -x^2 - 4x - 1$

4) $y = x^2 + 6x + 8$

5) $y = x^2 - 8x + 14$

6) $y = x^2 + 2x + 4$

7) $y = -(x - 4)^2 + 3$

8) $y = 2(x - 1)^2 + 1$

9) $y = -(x - 2)^2 - 2$

10) $y = (x - 2)^2 + 4$

11) $y = 3(x - 1)^2 - 3$

12) $y = -2(x + 1)^2 + 1$

13) $y = (x + 3)^2 + 2$

14) $y = -2(x - 4)^2 + 2$

15) $y = -2(x - 2)^2 - 2$

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