Algebra 2   Name_____

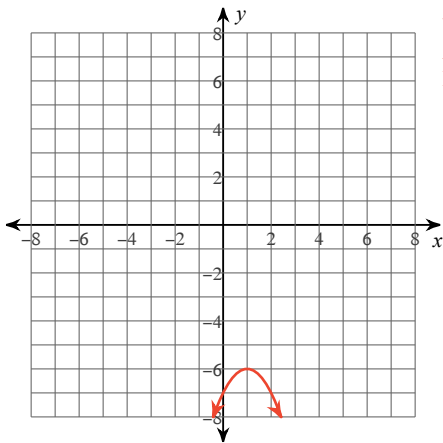# Graphing in Standard Form
                                               Date_____ Period_____
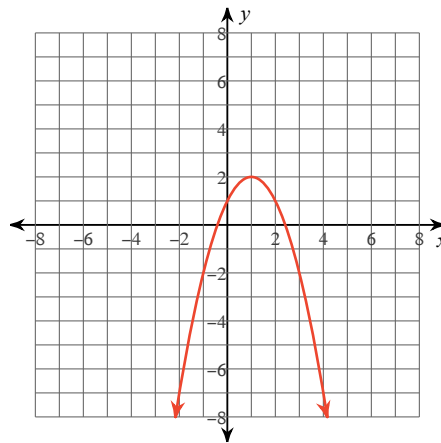
Identify the vertex, axis of symmetry, and min/max value of each. Then sketch the graph.
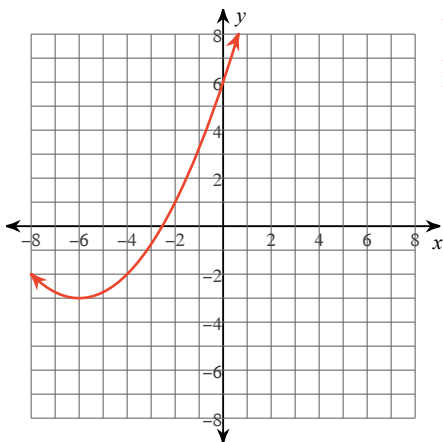
1) $f(x) = -x^2 + 2x - 7$

Vertex: $(1, -6)$
Axis of Sym.: $x = 1$
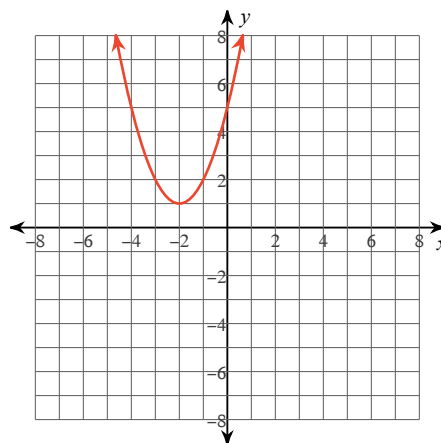Max value $= -6$

2) $f(x) = -x^2 + 2x + 1$

Vertex: $(1, 2)$
Axis of Sym.: $x = 1$
Max value $= 2$
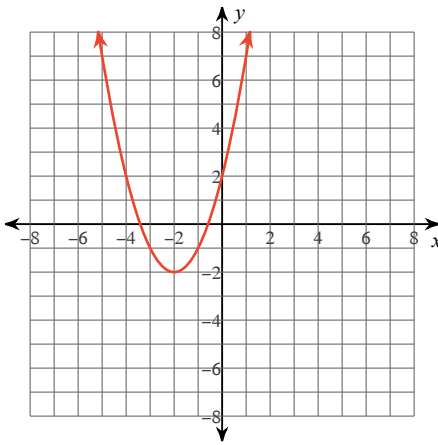
3) $f(x) = \frac{1}{4}x^2 + 3x + 6$

Vertex: $(-6, -3)$
Axis of Sym.: $x = -6$
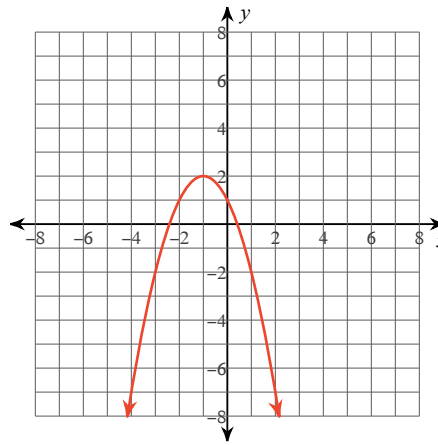Min value $= -3$

4) $f(x) = x^2 + 4x + 5$

Vertex: $(-2, 1)$
Axis of Sym.: $x = -2$
Min value $= 1$
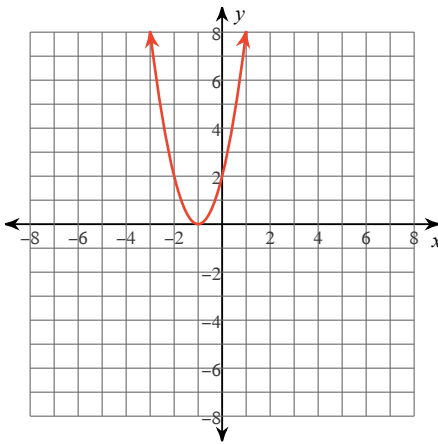
5) $f(x) = x^2 + 4x + 2$

Vertex: $(-2, -2)$
Axis of Sym.: $x = -2$
Min value $= -2$
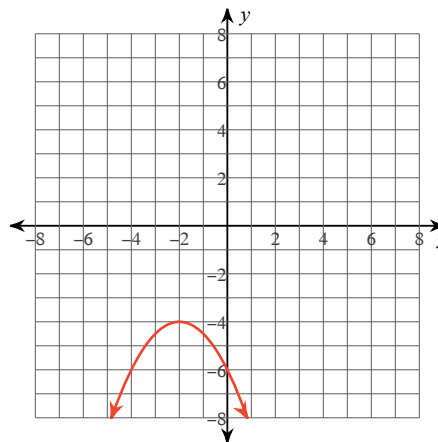
6) $f(x) = -x^2 - 2x + 1$

Vertex: $(-1, 2)$
Axis of Sym.: $x = -1$
Max value $= 2$

7) $f(x) = 2x^2 + 4x + 2$

Vertex: $(-1, 0)$
Axis of Sym.: $x = -1$
Min value $= 0$

8) $f(x) = -\dfrac{1}{2}x^2 - 2x - 6$

Vertex: $(-2, -4)$
Axis of Sym.: $x = -2$
Max value $= -4$