

Graphing Parabolas Given the Standard Equation

Identify the vertex and axis of symmetry of each. Then sketch the graph.

1) $x = -2y^2 - 8y - 14$

2) $x = -\frac{1}{3}y^2 + 2y - 1$

3) $x = -y^2 - 10y - 30$

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

5) $y = 2x^2 - 24x + 70$

6) $y = \frac{1}{3}x^2 + 2x + 5$

7) $y = -x^2 + 8x - 22$

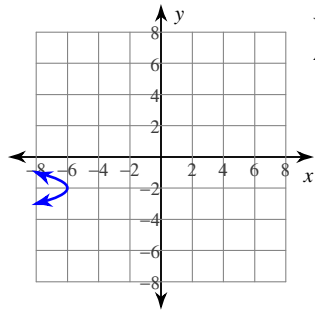
8) $y = 2x^2 - 8x + 8$

9) $y = -x^2 - 8x - 16$

10) $y = x^2 + 10x + 24$

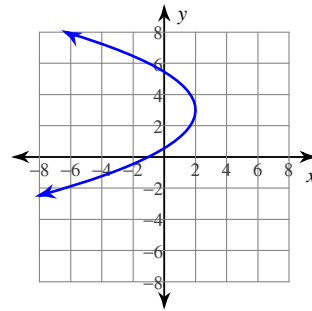
Answers to Graphing Parabolas Given the Standard Equation

1)



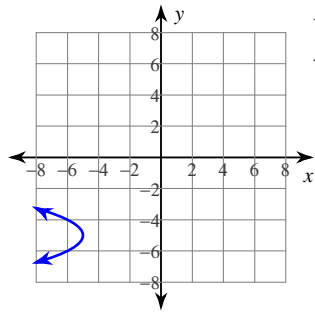
Vertex: $(-6, -2)$
Axis of Sym.: $y = -2$

2)



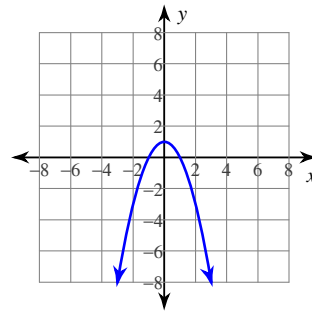
Vertex: $(2, 3)$
Axis of Sym.: $y = 3$

3)



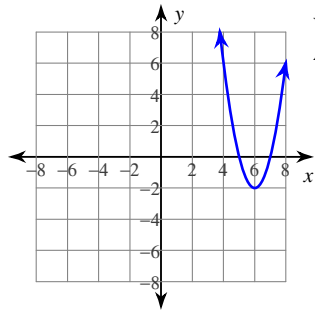
Vertex: $(-5, -5)$
Axis of Sym.: $y = -5$

4)



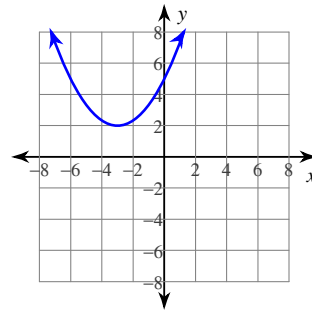
Vertex: $(0, 1)$
Axis of Sym.: $x = 0$

5)



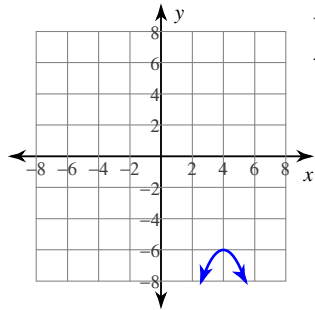
Vertex: $(6, -2)$
Axis of Sym.: $x = 6$

6)



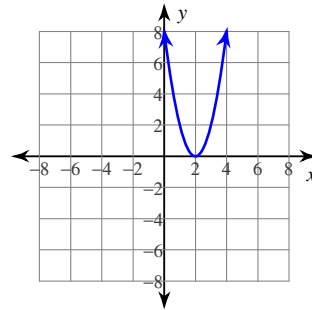
Vertex: $(-3, 2)$
Axis of Sym.: $x = -3$

7)



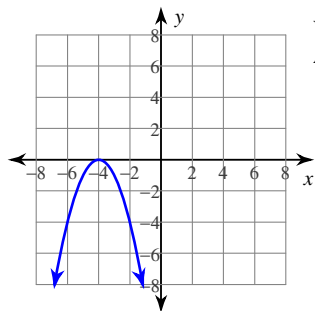
Vertex: $(4, -6)$
Axis of Sym.: $x = 4$

8)



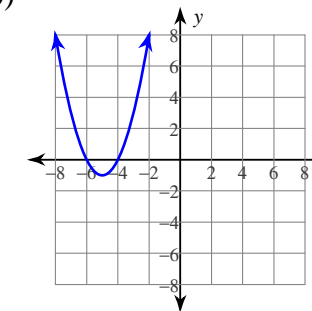
Vertex: $(2, 0)$
Axis of Sym.: $x = 2$

9)



Vertex: $(-4, 0)$
Axis of Sym.: $x = -4$

10)



Vertex: $(-5, -1)$
Axis of Sym.: $x = -5$