

Converting Vertex to Standard Form

Use the information provided to write the standard form equation of each parabola.

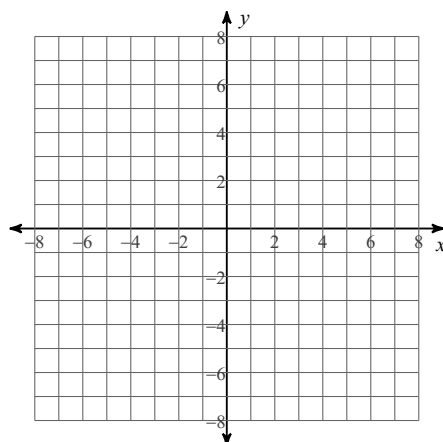
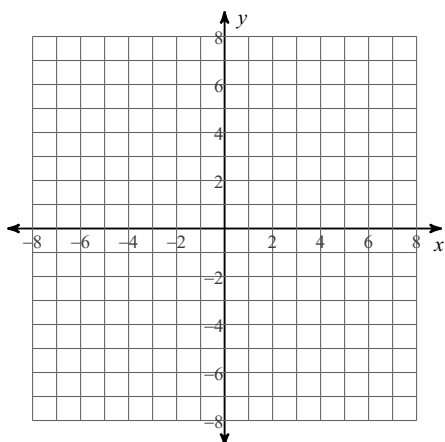
1) $y = (x + 7)^2 + 10$

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

Identify the vertex, axis of symmetry, and min/max value of each. Then sketch the graph.

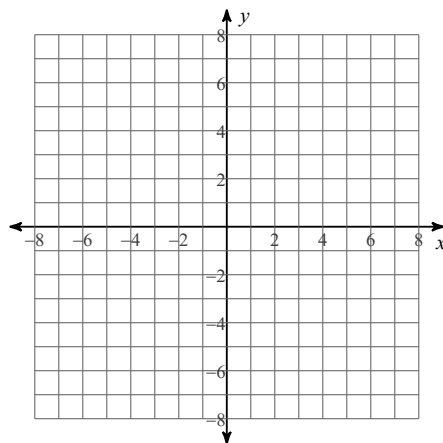
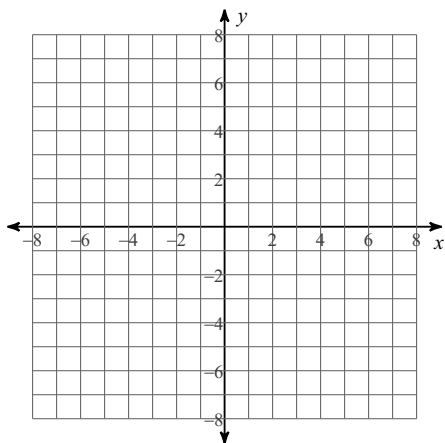
3) $y = (x - 3)^2$

4) $y = (x - 5)^2 - 5$



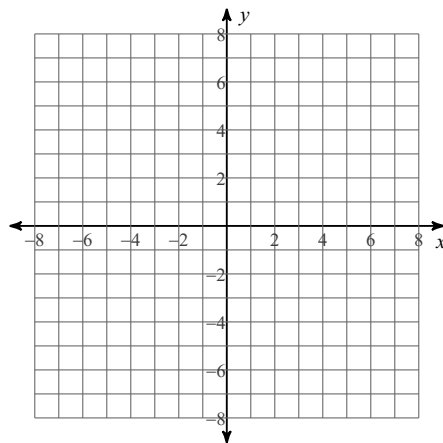
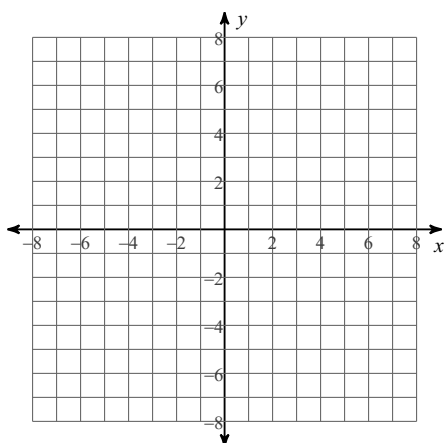
5) $y = -(x - 4)^2 + 4$

6) $y = -(x - 1)^2 - 4$



7) $y = -\frac{1}{2}(x - 2)^2 + 4$

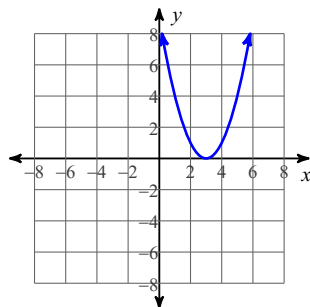
8) $y = -2(x - 5)^2$



Answers to Converting Vertex to Standard Form

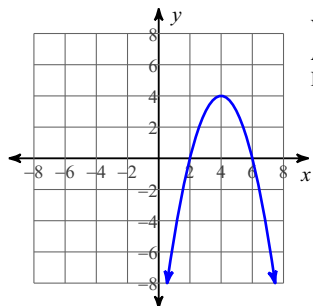
1) $y = x^2 + 14x + 59$

3)



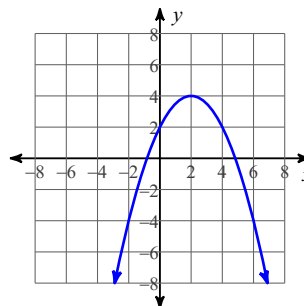
Vertex: $(3, 0)$
Axis of Sym.: $x = 3$
Min value = 0

5)



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

7)



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