Name:

Unit 8: Graphing Quadratics Study Guide

1. Which of the following quadratic functions would have a graph open downward and shift up 4?

Make a sketch of the graph to the right.

a. $f(x) = 5x^2 - 4$

b. $f(x) = -5x^2 - 4$

c. $f(x) = -5x^2 + 4$

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

For #'s 2-3, draw an accurate graph (with at least five key points) and find the following:

2. $y = -(x+3)^2 - 5$

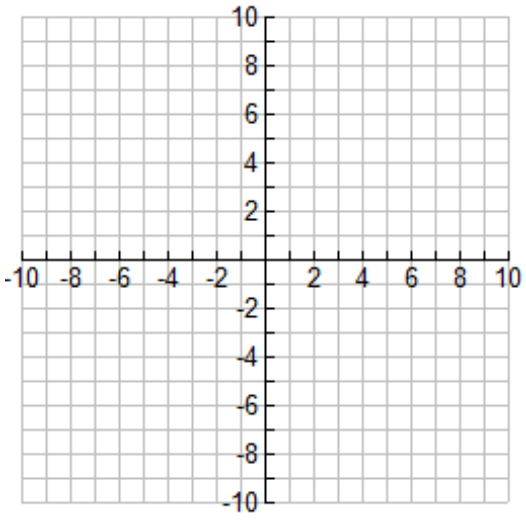
Axis of Symmetry:_____

Vertex:_____ MAX or MIN

direction of graph: _____

range: _____

End Behavior: $x \to -\infty,\ y \to$ _____
$x \to \infty,\ y \to$ _____



3. $y = -2(x+4)^2 + 9$

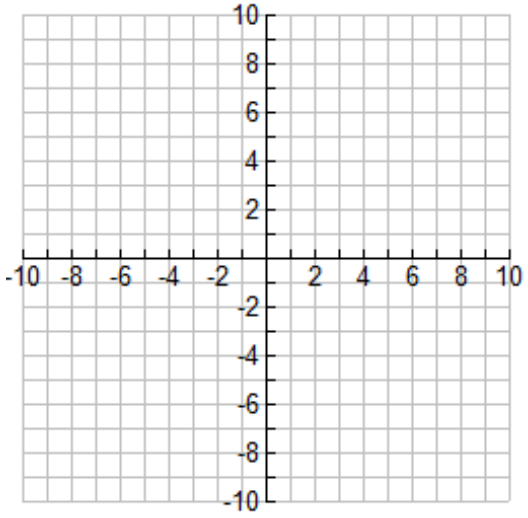
Axis of Symmetry:_____

Vertex:_____ MAX or MIN

direction of graph: _____

range: _____

End Behavior: $x \to -\infty,\ y \to$ _____
$x \to \infty,\ y \to$ _____



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Describe the transformation(s) on each of the following functions compared to the parent function $y = x^2$.

4. $f(x) = 2(x-4)^2$

5. $g(x) = -(x+3)^2 + 5$

6. $h(x) = 6x^2 + 7$

For #'s 7-8, draw an accurate graph (with at least five key points) and find the following:

7. $y = 3x^2 + 6x - 2$

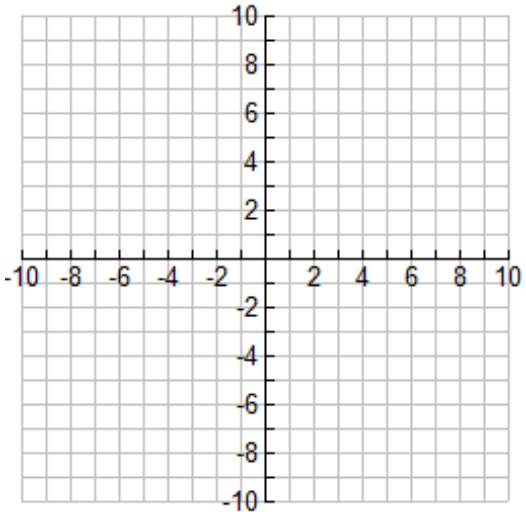
Axis of Symmetry:_____

Vertex:_____ MAX or MIN

y-intercept:_____

range: _____

End Behavior: $x \to -\infty,\ y \to$ _____
$x \to \infty,\ y \to$ _____



8. $y = -2x^2 + 4x + 3$

Axis of Symmetry:_____

Vertex:_____ MAX or MIN

y-intercept:_____

range: _____

End Behavior: $x \to -\infty,\ y \to$ _____
$x \to \infty,\ y \to$ _____