

Name: _____ Date: _____ Period: _____

Review for Chapter 9 Quiz (Graph Portion)

Graph using 5 points. Then write the vertex, axis of symmetry, max/min. Use the formula $-b/2a$ for x-coordinate of the vertex!

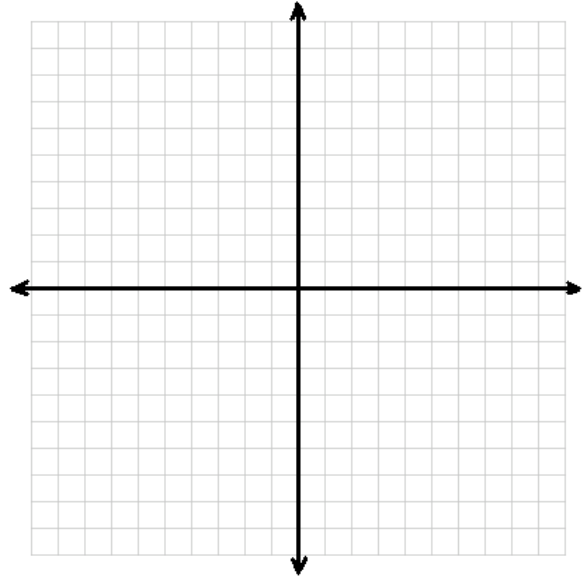
1. $y = -2x^2 + 8x - 4$

Vertex: _____

Axis of Sym: _____

Min: _____

Max: _____



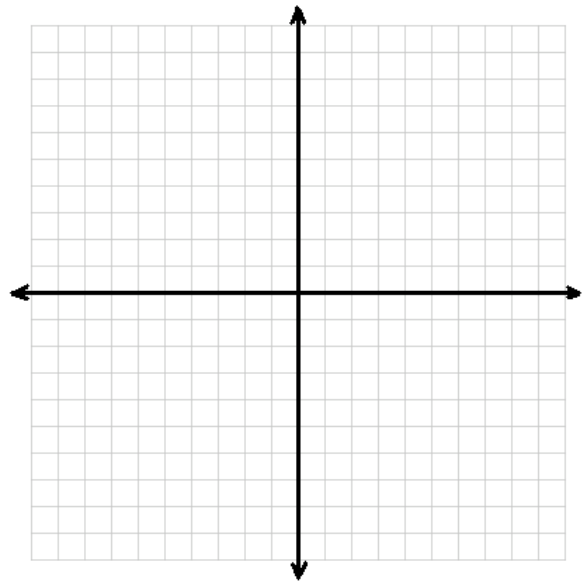
2. $y = x^2 + 4x + 6$

Vertex: _____

Axis of Sym: _____

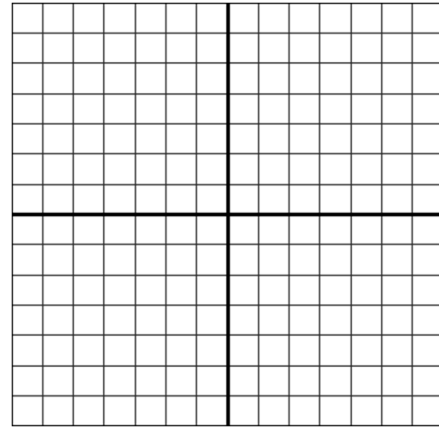
Min: _____

Max: _____



3. Draw a rough sketch of the graph of the quadratic equation that has solutions of $x = -9$ and $x = 1$, and a vertex of $(-4, -6)$.

You should have 3 points clearly plotted and labeled.



4. You hit a golf ball with an initial vertical velocity of 85 ft/s. The function $h = -16t^2 + 85t + 1$ models the height, h , in feet, of the ball at time t , in seconds.

a) How long will it take for the ball to reach its maximum height?

b) What is the maximum height of the ball?

c) How long is the ball in the air?

5. A rocket is launched from the ground with an initial vertical velocity of 150 ft/s. The function $h = -16t^2 + 150t$ models the height, h , in feet of the rocket at time, t , in seconds.

How long did it take to reach its maximum height? What is the maximum height that the rocket will reach? How long is the rocket in the air?

6. Order the group of quadratic functions from **widest to narrowest** graph.

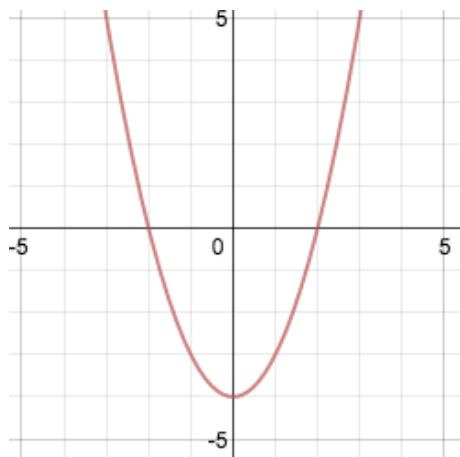
a) $y = -4x^2$, $y = -x^2$, $y = -3x^2$ _____, _____, _____

b) $y = \frac{1}{2}x^2$, $y = -\frac{1}{3}x^2$, $y = \frac{3}{4}x^2$ _____, _____, _____

7. How does the graph of $y = x^2 - 9$ differ from the graph of $y = x^2$?

Choose the correct equation for each graph.

8.



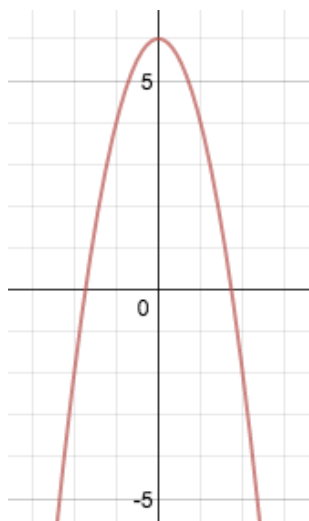
a) $y = 2x^2 - 4$

b) $y = -x^2 - 4$

c) $y = x^2 - 4$

d) $y = \frac{1}{2}x^2 - 4$

9.



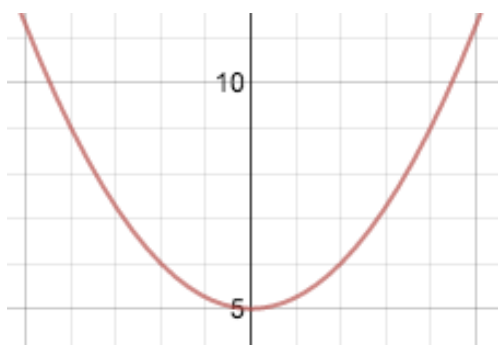
a) $y = -2x^2 + 6$

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

c) $y = -\frac{1}{2}x^2 + 6$

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

10.



a) $y = \frac{1}{4}x^2 + 5$

b) $y = x^2 + 5$

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

d) $y = x^2 + 5$

