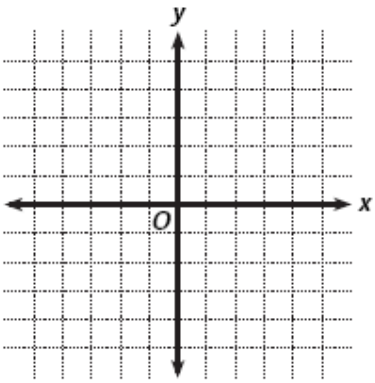
Algebra 1 – Homework Name: _____
Graphing Quadratic Equations – Vertex Form

Graph and identify each part of the quadratic equation.

1. $f(x) = \frac{1}{2}x^2 - 3$ h = k = open up or down =



Describe the translation:

Vertex = (,)

y-intercept = (,) x-intercept = (,)

Domain: Range:

2. Given the following equation $f(x) = (x-4)^2 - 1$:

a. Find the x-intercepts b. Find the y-intercept

3. Find an equivalent form of $3(b-3)^2$

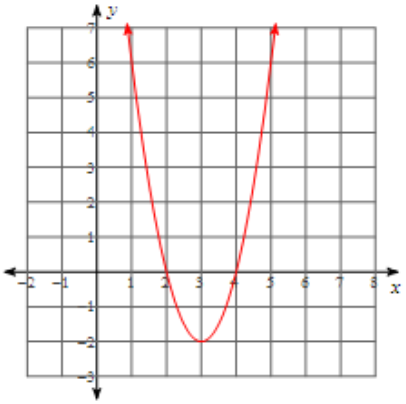
4. Given the equation and graph of $y = 2(x-3)^2 - 2$, what is the domain and range?

A. Domain: *all real numbers*
Range: $y \le -2$

B. Domain: *all real numbers*
Range: $y \ge -2$

C. Domain: *all real numbers*
Range: $y \ge 2$

D. Domain: $-2 \le x \le 2$
Range: $y \ge -2$



5. Describe the transformation of the following equation: $f(x) = 3(x+2)^2 - 1$