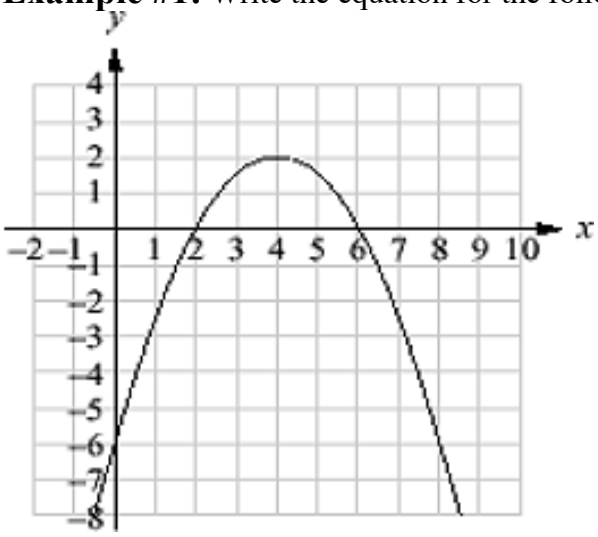
Chapter 7: Quadratics

Name: _____

Lesson 7.3 Writing an Equation

Example #1: Write the equation for the following parabola

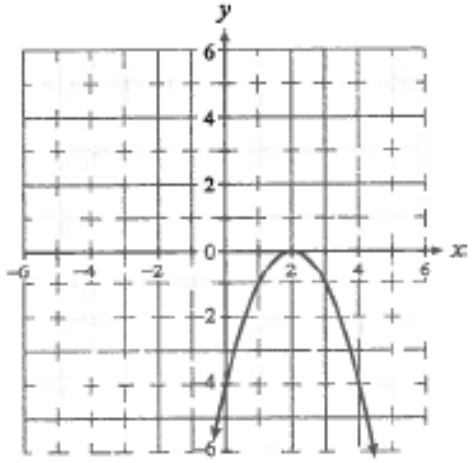


Example #2: A parabola has a y-intercept of -4 and a vertex at (3,-7). Write the equation for this quadratic

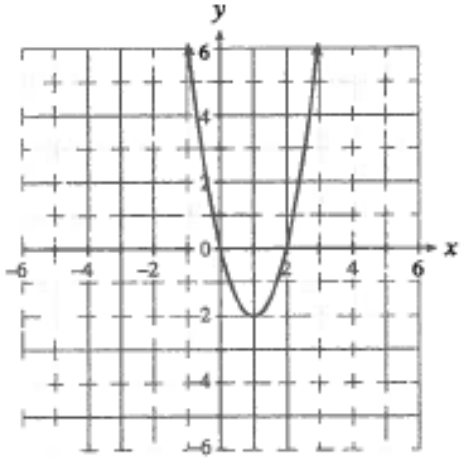
Example #3: A parabola has x-intercepts of -3 and 5 and goes through the point (2,15). Write the equation for this quadratic

Assignment: Write the equation for each of the following parabola graphs

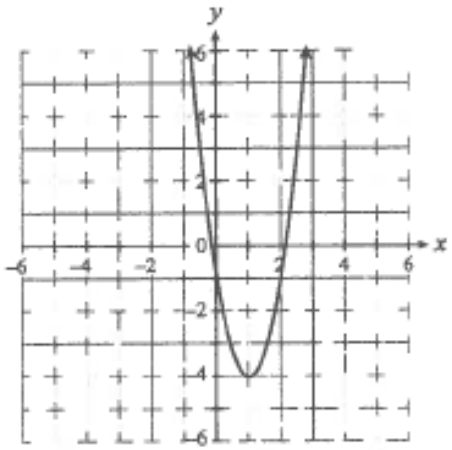
1)



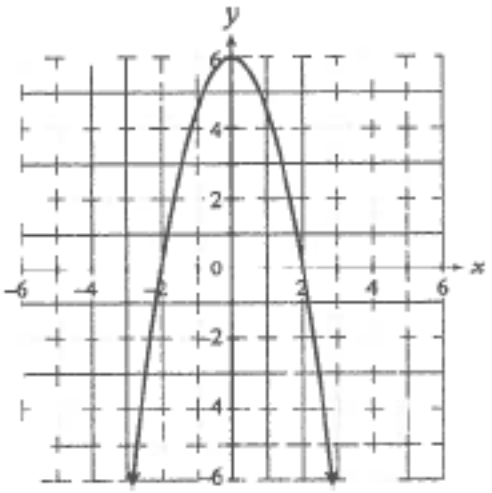
2)



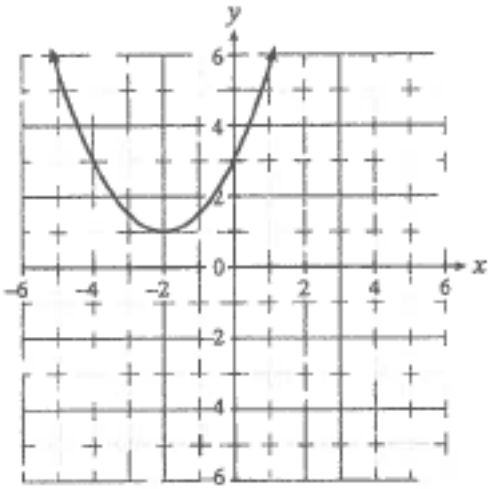
3)



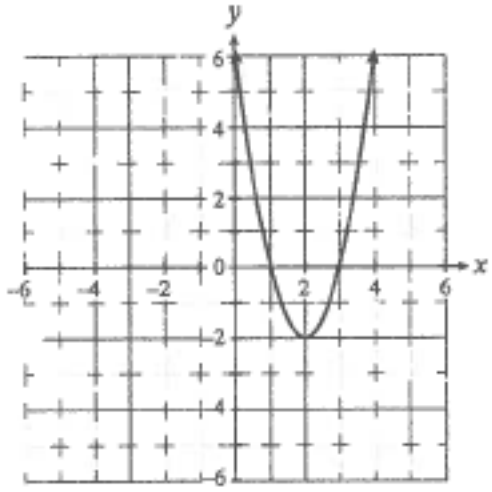
4)



5)



6)



7) A parabola has a vertex at (2,1) and goes through the origin

8) A parabola has a vertex at (-2,-5) and a y-intercept of 3

9) A parabola has a vertex at (-1,6) and an x-intercept of -4

10) A parabola has a vertex at (-4,0) and goes through the point (-2,12)

11) A parabola has an axis of symmetry at x=1, a y-intercept of 2, and only one x-intercept

Answer Key

1) $y = -(x-2)^2$
2) $y = 2(x-1)^2 - 2$
3) $y = 3(x-1)^2 - 4$
4) $y = -\frac{3}{2}x^2 + 6$
5) $y = \frac{1}{2}(x+2)^2 + 1$
6) $y = 2(x-2)^2 - 2$
7) $y = -\frac{1}{4}(x-2)^2 + 1$
8) $y = 2(x+2)^2 - 5$
9) $y = -\frac{2}{3}(x+1)^2 + 6$
10) $y = 3(x+4)^2$
11) $y = 2(x-1)^2$