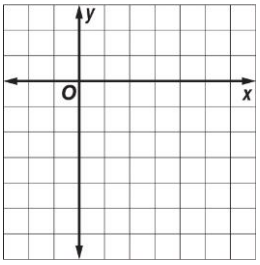
NAME _____ DATE _____ PERIOD _____

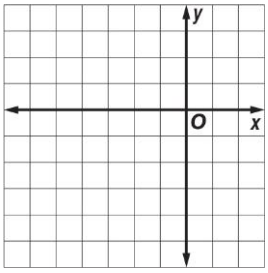
9-1 Practice
Graphing Quadratic Functions

Graph each by using –b/2a to find the x-coordinate of the vertex.

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



3. $y = -2x^2 - 8x - 5$



Find the vertex, the equation of the axis of symmetry, and the *y*–intercept of the graph of each function.

4. $y = x^2 - 9$

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

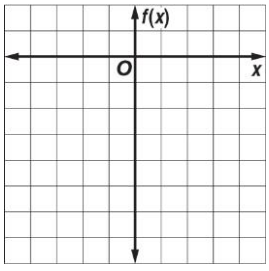
Consider each equation. Determine whether the function has a *maximum* or a *minimum* value. State the maximum or minimum value.

7. $y = 5x^2 - 2x + 2$

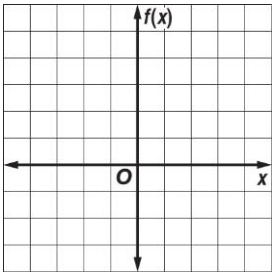
9. $y = \frac{3}{2}x^2 + 4x - 9$

Graph each function by using –b/2a to find the x-coordinate of the vertex as the first step.

10. $f(x) = -x^2 + 1$



12. $f(x) = -2x^2 + 8x - 3$



13. BASEBALL The equation $h = -0.005x^2 + x + 3$ describes the path of a baseball hit into the outfield, where h is the height and x is the horizontal distance the ball travels.

a. What is the equation of the axis of symmetry?

b. What is the maximum height reached by the baseball?

c. An outfielder catches the ball three feet above the ground. How far has the ball traveled horizontally when the outfielder catches it? (Hint: How far has it traveled when it is halfway to the outfielder? Draw a picture if necessary)