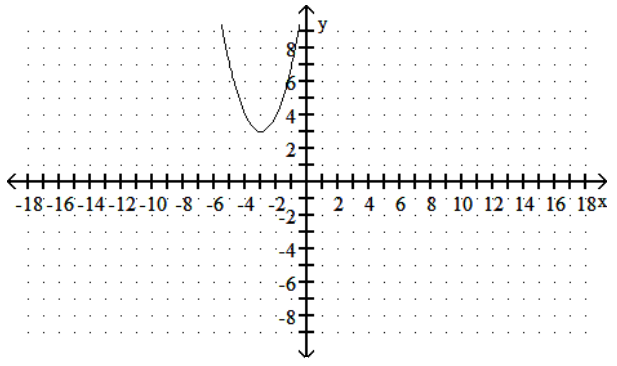
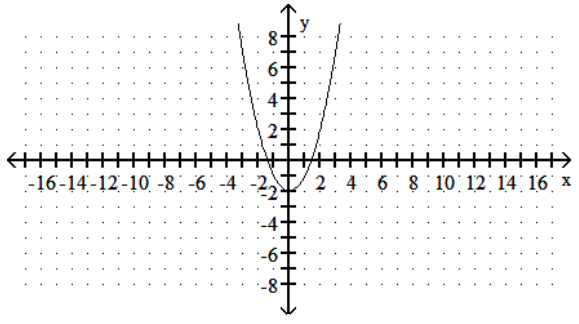
MAC1105 College Algebra
3.1: Quadratic functions Practice 11

The graph of a quadratic function is given. Determine the function's equation.

1)



2)



Find the axis of symmetry of the parabola defined by the given quadratic function.

3) $f(x) = x^2 + 5$

4) $f(x) = (x + 2)^2 + 5$ 4) _____

A) $x = 2$ B) $y = -5$ C) $x = -2$ D) $y = 5$

Find the range of the quadratic function.

5) $f(x) = (x + 4)^2 + 9$

6) $f(x) = -7(x - 4)^2 - 9$ 6) _____

A) $(-\infty, -9]$ B) $(-\infty, 4]$ C) $[-4, \infty)$ D) $[-9, \infty)$

Find the y-intercept for the graph of the quadratic function.

7) $f(x) = 2 + 3x + x^2$ 7) _____

A) (0, 2) B) (0, -2) C) (0, 3) D) (0, 1)

Find the domain and range of the quadratic function whose graph is described.

8) The minimum is -6 at $x = -1$.

9) The maximum is -3 at $x = -1$

Find the coordinates of the minimum or maximum point.

10) $f(x) = x^2 + 2x - 6$

Answer Key
Testname: PRACTICE11

1) $f(x) = (x + 3)^2 + 3$
2) $h(x) = x^2 - 2$
3) $x = 0$
4) C
5) $[9, \infty)$
6) A
7) A
8) Domain: $(-\infty, \infty)$
   Range: $[-6, \infty)$
9) Domain: $(-\infty, \infty)$
   Range: $(-\infty, -3]$
10) minimum; $(-1, -7)$