Algebra 1                                                    Name:_____
HW #10: Writing Quadratic Functions

Write the vertex form equation of the quadratic function for each of the following:

**1.** Vertex: $(2, -1)$
   Point:  $(4, 3)$

**2.** Vertex: $(-4, 6)$
   Point:  $(-1, 9)$

**3.** Vertex: $(4, 5)$
   Point:  $(8, -3)$

**4.** Vertex: $(0, 0)$
   Point:  $(-2, -12)$

5.      Vertex at $(2, 2)$, passing through point $(0, 0)$

6.      Vertex at $(-2, 3)$, $x$-intercept of 1

7.      Vertex at $(4, 7)$, $y$-intercept of 10

Convert each of the following to standard form:

8.  $f(x)=x^2+4x+5$

9.  $f(x)=2x^2-4x-3$

10.  $y=-x^2+6x-8$

11.  $f(x)=-4x^2+16x-10$

Convert each of the following to standard form:

12.  $y = (x + 5)^2 - 12$

13.  $y = -(x - 7)^2 + 50$

14.  $y = 2(x + 1)^2 - 3$

15.  $y = -2(x - 8)^2 + 140$