Name_____

Properties of Parabolas

Date_____ Period____

Identify the vertex, axis of symmetry, and direction of opening of each.

Hint: For #'s 4, 6, 9 divide by the number in front of x^2

1) $y = 2(x+10)^2 + 1$

2) $y = -\frac{1}{3}(x-7)^2 + 1$

3) $y = -(x-3)^2 - 1$

4) $y = 2x^2 + 36x + 166$

5) $y = x^2 + 4x - 5$

6) $y = 2x^2 + 8x + 16$

7) $y = 2x^2$

8) $x = \frac{1}{4}y^2$

9) $x = -y^2 + 4y - 5$

10) $x = -(y+3)^2 + 4$