Name: _____

Parabolas

1) Find the vertex of each parabola and state whether the parabola opens upward, downward, to the right, or to the left. Also give the equation of the axis of symmetry.

1) $y = x^2 - 5$

2) $y = -4x^2$

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

4) $y + 2 = -(x+1)^2$

5) $\left(\dfrac{y-4}{2}\right)^2 = \dfrac{x+5}{4}$

6) $x = 2y^2 + 1$

2) Write an equation in standard form for each parabola.

1) $y = x^2 + 4$

2) $x = y^2 - 3$

3) $y = (x-2)^2 + 5$

4) $x = 2(y+1)^2 + 4$

5) $\dfrac{x-5}{6} = \left(\dfrac{y+3}{2}\right)^2$

6) $(x+3.5)^2 = \dfrac{y+1.5}{2}$