Conic Sections CS3: Parabolas 2

For the given parabola, find the proper values:

1. $y = -(x - 5)^2$ 2. $x = 4(y + 3)^2 - 8$ 3. $y = x^2 + 6$

direction of opening: _____   _____   _____

h = _____   k = _____   h = _____   k = _____   h = _____   k = _____

a = _____   a = _____   a = _____

The vertex: _____   _____   _____

The focus: _____   _____   _____

The directrix: _____   _____   _____

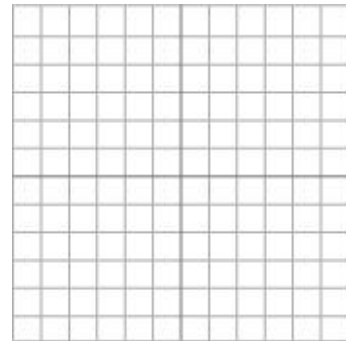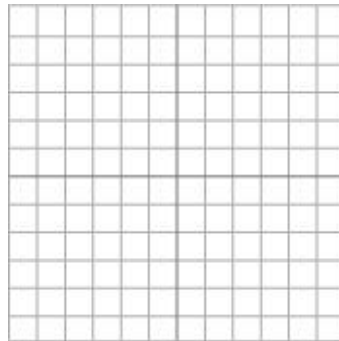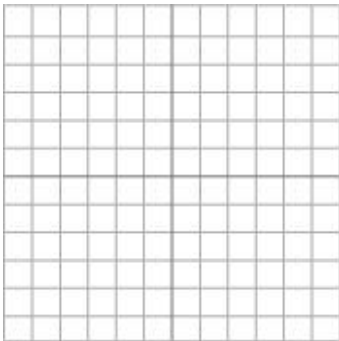The axis of symmetry   _____   _____   _____

Graph each parabola:

4. $x = \frac{1}{4}y^2$ 5. $y = \frac{1}{2}(x - 4)^2 + 3$ 6. $2(x - 1) = (y + 2)^2$

Write an equation for each parabola described below:

7. vertex = (3, 0) and focus = (7, 0)

8. vertex = (4, 4) and focus = (4, 0)

9. focus = (-2, 4) and directrix is x = 2

10. vertex = (3, -4), axis of symmetry is x = 3, the measure of the latus rectum = 4, and a > 0