MORE PRACTICE: Parabolas 2

For the given parabola, find the proper values:

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

direction of opening: _____   _____   _____

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

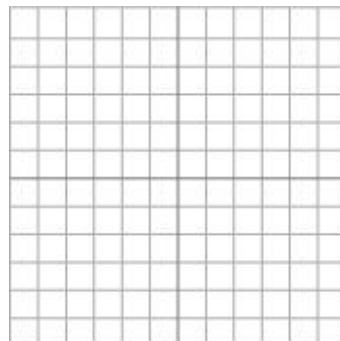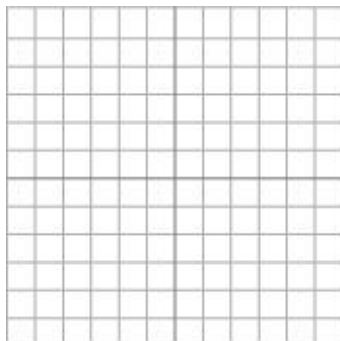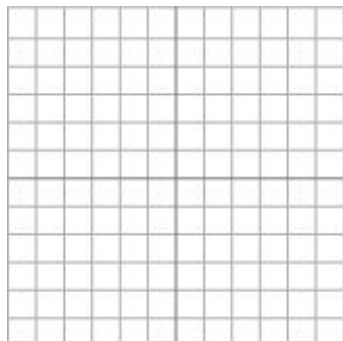a = _____   a = _____   a = _____

The vertex: _____   _____   _____

The focus: _____   _____   _____

The directrix: _____   _____   _____

The axis of symmetry   _____   _____   _____

Graph each parabola:

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

Write an equation for each parabola described below:

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

8. vertex = (2, 4) and focus = (4, 4)

9. focus = (-1, 3) and directrix is y = 2

10. vertex = (-1, -1), axis of symmetry is x = -1, the measure of the latus rectum = 8, and a < 0