$$y^2 = 8x + 48$$

$(y-k)^2 = 4p(x-h)$

$(y-0)^2 = 8(x+6)$

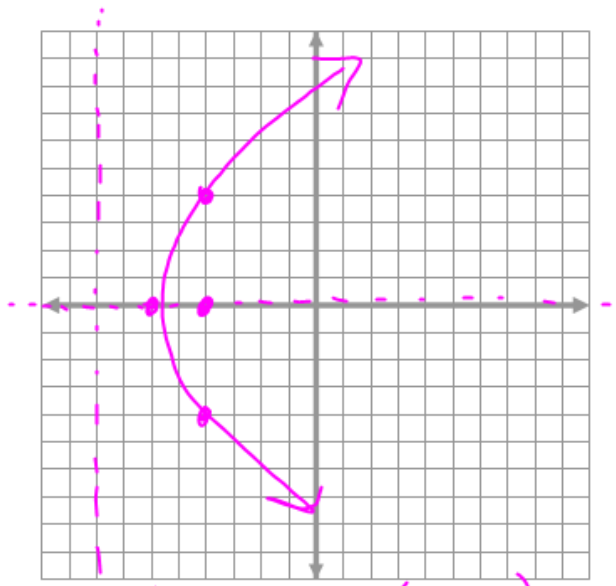
$4p = 8$

$p = 2$

$\boxed{(y-0)^2 = 4(2)(x+6)}$

$h = -6$
$k = 0$
$p = 2$

vertex $(-6, 0)$
focus $(-4, 0)$
directrix: $x = -8$
axis of symm: $y = 0$



at $y=4$ $(4-0)^2 = 4(2)(x+6)$

$16 = 8x + 48$

$-32 = 8x$

$-4 = x$

$(-4, 4)$

$$2x^2 - 8x + y + 6 = 0$$

$$-y \quad -6 \qquad -y \quad -6$$

$$2(x^2 - 4x + 4) = -y - 6 + 2(4)$$

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

$$\frac{2(x-2)^2}{2} = \frac{-(y-2)}{2}$$

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

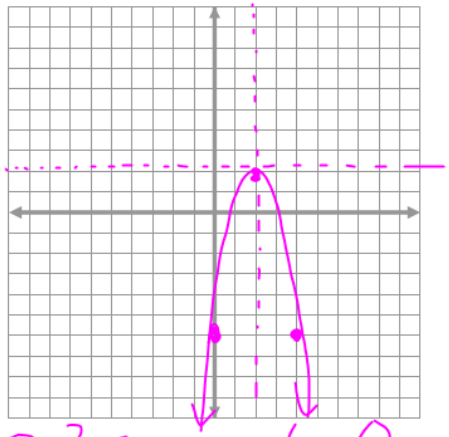
$$4p = -\frac{1}{2}$$

$$p = -\frac{1}{8}$$

$$\boxed{(x-2)^2 = 4\left(-\frac{1}{8}\right)(y-2)}$$

$h = 2$
$k = 2$
$p = -\frac{1}{8}$

vertex $(2, 2)$
focus $\left(2, \frac{15}{8}\right)$
directrix: $y = \frac{17}{8}$
axis of symm: $x = 2$



$$2x^2 - 8x + y + 6 = 0$$

at $x = 4$ $\quad 2(4)^2 - 8(4) + y + 6 = 0$

$(4, -6)$ $\quad y + 6 = 0$

$y = -6$

p. 659-661
15, 17, 21, 23-26, 29, 36, 45