

$$10. \quad y^2 - 6y - 8x + 11 = 0$$

$$y^2 - 6y = 8x - 11$$

$$\begin{matrix} (-6 \cdot \frac{1}{2})^2 \\ (-3)^2 \\ 9 \end{matrix} \quad y^2 - 6y + 9 = 8x - 11 + 9$$

$$(y-3)^2 = 8x + 8$$

$$(y-3)^2 = 8(x+1)$$

$$(y-3)^2 = 4(\underbrace{2}_{p}(\underbrace{x+1}_{x-h}))$$

$$\begin{matrix} \downarrow & \downarrow & \downarrow \\ k=3 & p=2 & h=-1 \end{matrix}$$

$$\text{Vertex: } (h, k) = (-1, 3)$$

$$\text{Focus: } (h+p, k) = (-1+2, 3) = (1, 3)$$

$$\text{Dir: } x = h - p$$

$$x = -1 - 2$$

$$x = -3$$

