

5. Focus: $(-2, 3)$ Dir: $y = -5$

\uparrow \uparrow \uparrow
 $h = -2$ $k+p = 3$ $k-p = -5$

$$\begin{aligned} k+p &= 3 \\ \underline{k-p} &= \underline{-5} \\ \hline 2k &= -2 \\ \underline{2k} &= \underline{-2} \\ k &= -1 \end{aligned}$$

$$\begin{aligned} k+p &= 3 \\ -1+p &= 3 \\ p &= 3+1 \\ p &= 4 \end{aligned}$$

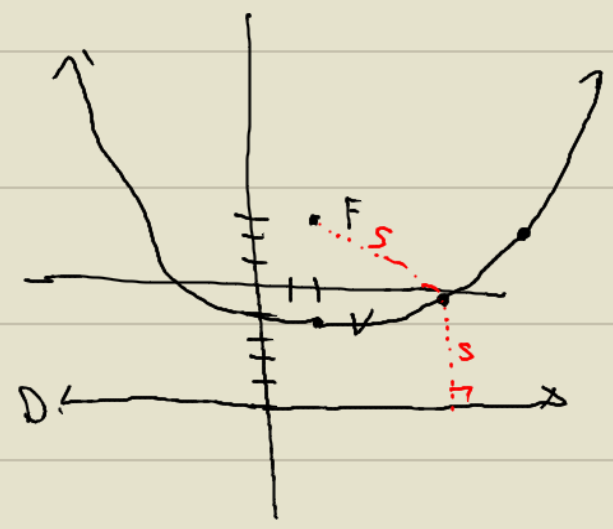
$h = -2$ $k = -1$ $p = 4$

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

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

$$(x+2)^2 = 16(y+1)$$

VERTEX
 (h, k)
 $(-2, -1)$



6. $y^2 = -8x$

(B) $(y-0)^2 = -8(x)$

$$(y-0)^2 = 4(-2)(x-0)$$

\downarrow \downarrow \downarrow
 $k=0$ $p=-2$ $h=0$

VERTEX: $(h, k) = (0, 0)$

Focus: $(h+p, k) = (0+(-2), 0)$

$(-2, 0)$

DIR: $x = h-p$

$$x = 0 - (-2)$$

$$x = 2$$

