Ex #2: $x-4=\frac{1}{8}(y+2)^2$

Find the equation/coordinates for the vertex, focus, directrix, axis of symmetry and latus rectum. Sketch.

$8(x-4)=(y+2)^2$ → opens right

length of LR

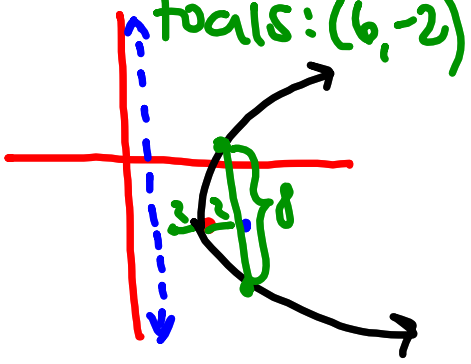
$P=2$

Vertex: $(4,-2)$

Focus: $(6,-2)$

Directrix

$X=2$



Ex #3: $x + y^2 = 4y - 1$

Find the equation/coordinates for the vertex, focus, directrix, axis of symmetry and latus rectum. Sketch.

$y^2 - 4y + 4 = -x - 1 + 4$

$(y-2)(y-2)$

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

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

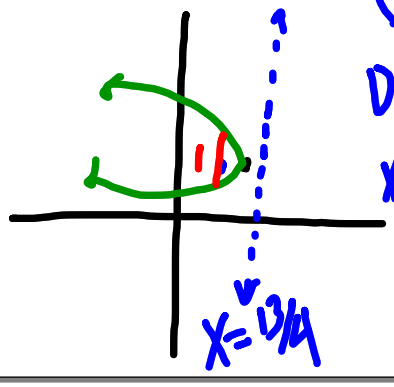
AOS $y = 2$

Vertex: $(3, 2)$

opens left

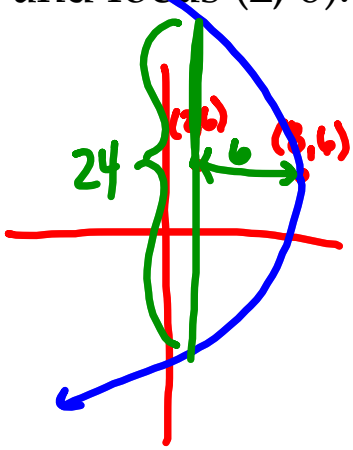
Focus: $(11/4, 2)$

Directrix $x = 13/4$



Ex #4:

Write the equation for a parabola with vertex at (8, 6) and focus (2, 6). Sketch a graph of the parabola.



$$(y-6)^2 = -24(x-8)$$

Assignment:

WS Parabolas Practice