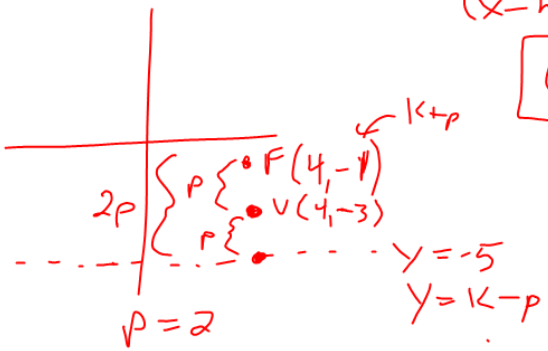
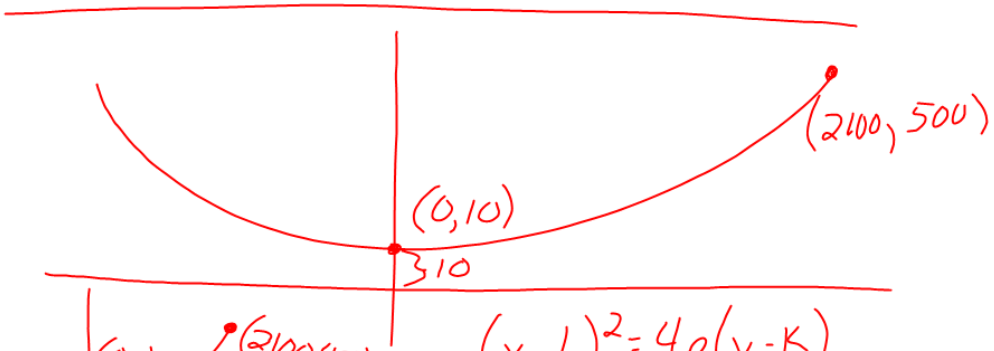
26. The focus is at $(4, -1)$, and the equation of the directrix is $y = -5$.

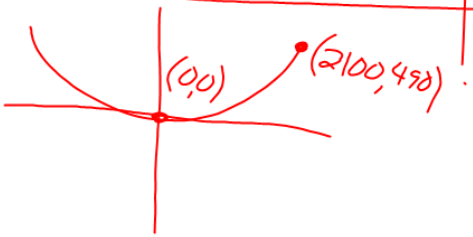
$(x-h)^2 = 4p(y-k)$

$\boxed{(x-4)^2 = 4(2)(y+3)}$



vertex $(4, -3)$
h k

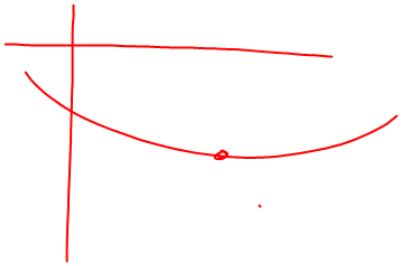




$(x-h)^2 = 4p(y-k)$

$(2100-0)^2 = 4p(500-10)$

$p = 2250$



$x^2 = 4(2250)(y-10)$

$x^2 = 9000(y-10)$

General Form for All conic Sections

$$Ax^2 + Cy^2 + Dx + Ey + F = 0$$

If $A = C \rightarrow$ circle

If A, C same sign $\rightarrow$ ellipse

If A, C opposite signs $\rightarrow$ hyperbola

If A or $C = 0 \rightarrow$ parabola

Identify the conic section represented by each equation.

a. $6y^2 + 3x - 4y - 12 = 0$

parabola

b. $3y^2 - 2x^2 + 5y - x - 15 = 0$

hyperbola

c. $9x^2 + 27y^2 - 6x - 108y + 82 = 0$

ellipse

d. $4x^2 + 4y^2 + 5x + 2y - 150 = 0$

circle