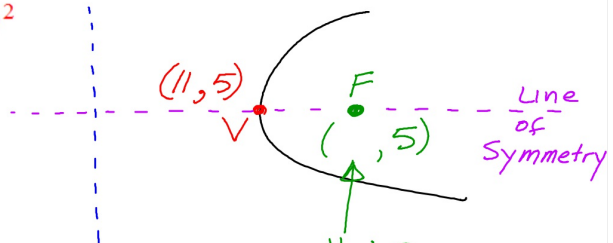
Find the coordinates of the Vertex and Focus and the equation of the Directrix.

$x - 11 = \frac{2}{13}(y-5)^2$

Vertex $(11, 5)$

Focus $(\frac{101}{8}, 5)$

Directrix $X = \frac{75}{8}$



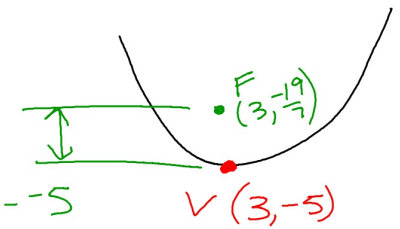
$C = \frac{1}{4(\frac{2}{13})} = \frac{1}{\frac{8}{13}} = 13/8$

$X = 11 - C = 11 - 13/8 = \frac{88}{8} - \frac{13}{8} = 75/8$

$11 + C = 11 + 13/8 = 88/8 + 13/8 = 101/8$

Write the equation of this parabola:

Vertex is $(3, -5)$ and the Focus is $(3, -\frac{19}{7})$.



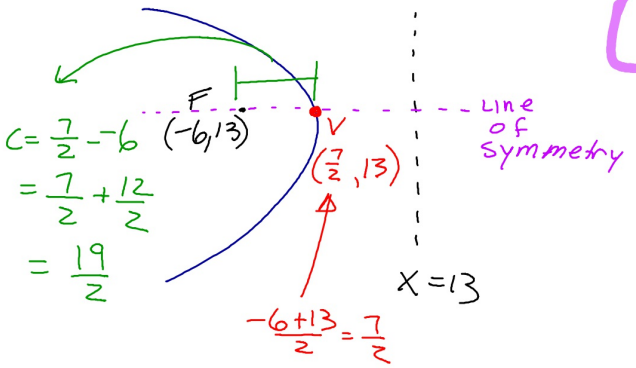
$C = -\frac{19}{7} - -5 = -\frac{19}{7} + \frac{35}{7} = \frac{16}{7}$

$a = \frac{1}{4(\frac{16}{7})} = \frac{1}{\frac{64}{7}} = \frac{7}{64}$

$y = \frac{7}{64}(x-3)^2 - 5$

Write the equation of this parabola:

The Focus is $(-6, 13)$ and the Directrix is $x = 13$.



$C = \frac{7}{2} - -6 = \frac{7}{2} + \frac{12}{2} = \frac{19}{2}$

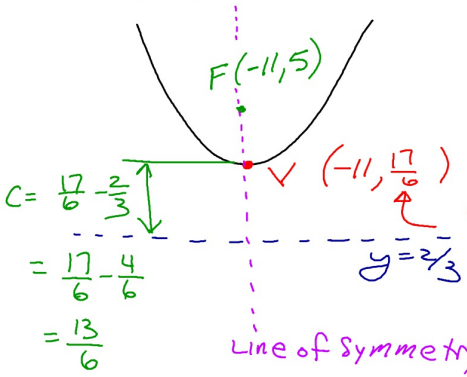
$-6 + \frac{13}{2} = \frac{7}{2}$

$a = \frac{1}{4(\frac{19}{2})} = \frac{1}{38}$

$X = -\frac{1}{38}(y-13)^2 + \frac{7}{2}$

Write the equation of this parabola:

Focus is $(-11, 5)$ and the Directrix is $y = \frac{2}{3}$



$C = \frac{17}{6} - \frac{2}{3} = \frac{17}{6} - \frac{4}{6} = \frac{13}{6}$

$\frac{5 + 2/3}{2} = \frac{\frac{15}{3} + \frac{2}{3}}{2} = \frac{\frac{17}{3}}{2} = \frac{17}{3} \cdot \frac{1}{2} = \frac{17}{6}$

$a = \frac{1}{4(\frac{13}{6})} = \frac{1}{\frac{26}{3}} = \frac{3}{26}$

$y - \quad = \frac{3}{26}(x+11)^2 + \frac{17}{6}$

You can now finish Hwk #28

Practice Sheet: Translating Parabolas

Due Monday

We are done with Chapter 10

Ch 10 Test will be Tuesday

Project will be due on Tuesday