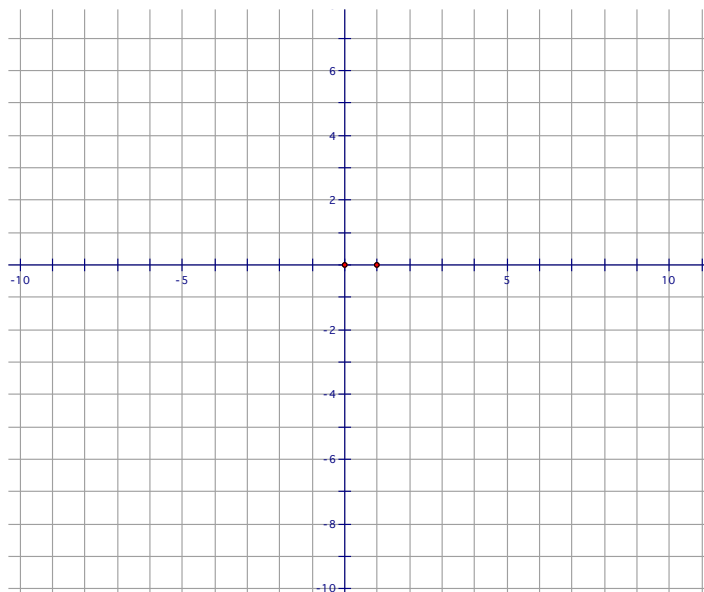
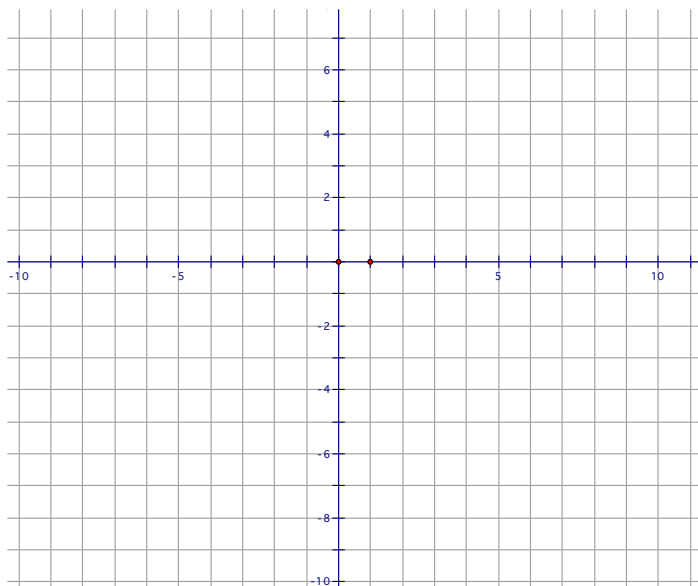


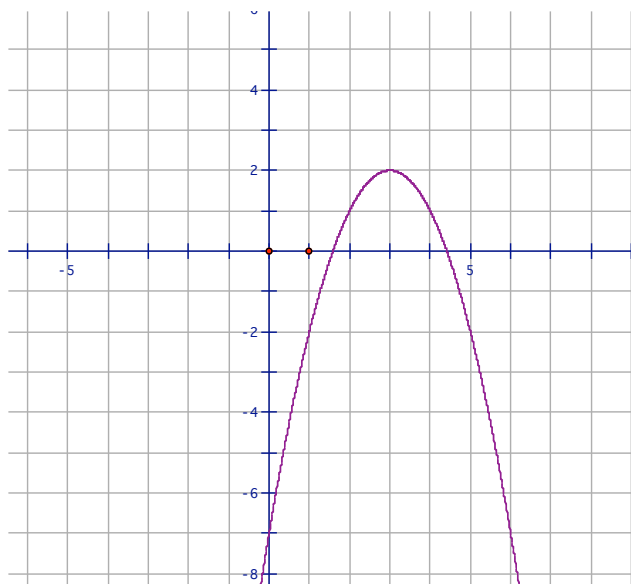
1. Graph the parabola:

a. $y + 7 = \frac{1}{8}(x - 3)^2$

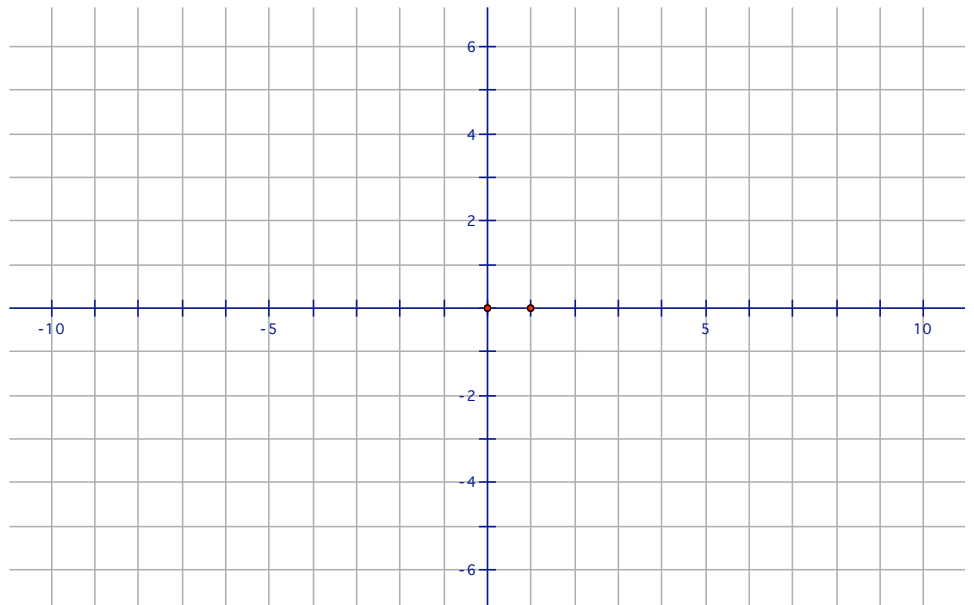
b. $(y - 2)^2 = 4(x - 3)$



2. Write the equation for this parabola. Locate and label (coordinates/equation) for the focus, and directrix.

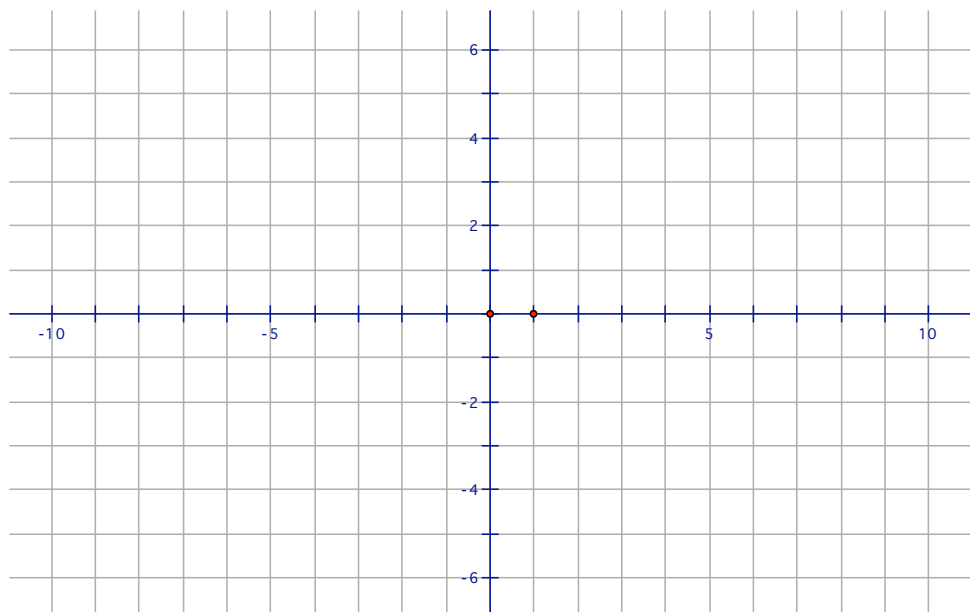


3. Find the equation of the parabola with vertex $(-3, 4)$ and focus $(-5, 4)$. Find the length of the latus rectum. Graph.



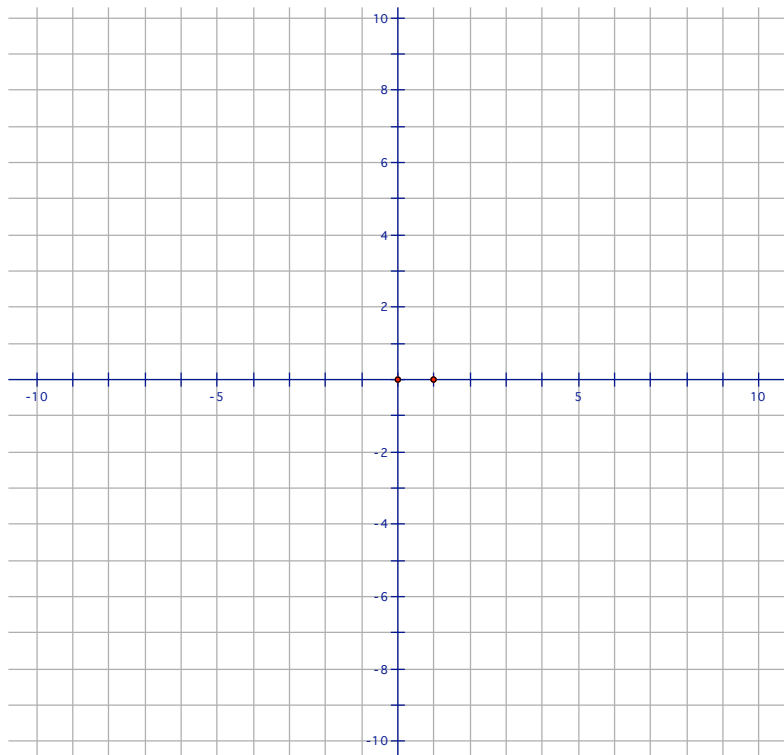
4. Rewrite the equation to match the standard form. Find the coordinates of the focus, and the equation of the directrix. Find the length of the latus rectum. Graph.

$$8x - y^2 = 2y + 9$$



5. Rewrite the equation to match the standard form. Find the coordinates of the focus, and the equation of the directrix. Find the length of the latus rectum. Graph.

$$2y + x^2 + 8x + 18 = 0$$



6. Find the equation of the parabola with endpoints of the latus rectum at $(-1, 4)$ and $(5, 4)$. (You may want to sketch a graph to help you 😊)

