HAT 2/7/18                                                         Name:_____
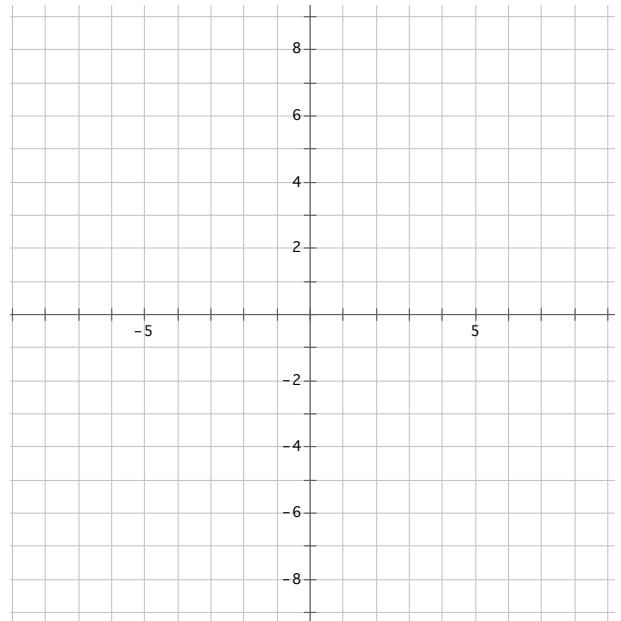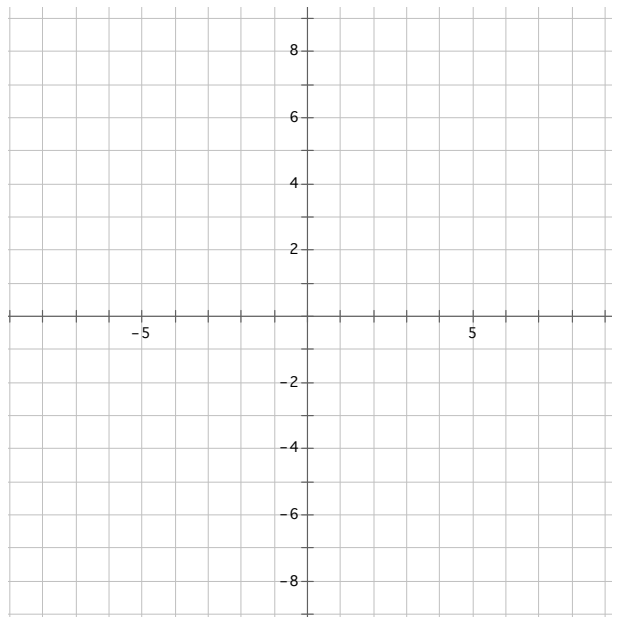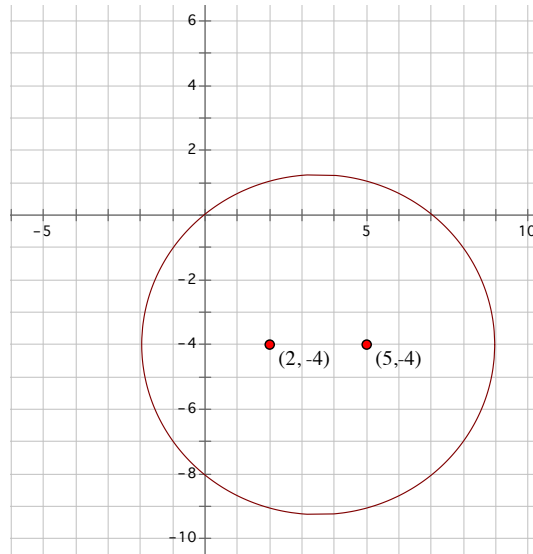Conics – Mixed Review

1.      Write the equation for the locus of points that are a distance of 8 from the point $(0,-3)$

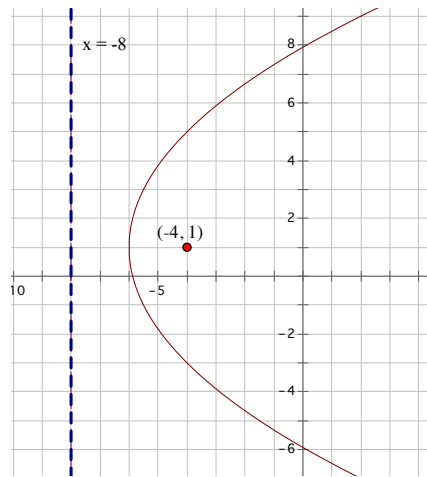2.      Sketch $4x^2 + 9y^2 - 16x + 90y = -205$. Be sure to include all key features.



3.      Graph $y^2 + 4x - 4y = 0$.

4. Write the equation for this curve with the given foci if $e = \dfrac{3}{11}$. Find the length of the minor axis.



5. Write the equation of the parabola with the given focus and directrix.



6. Write the equation for the locus of points such that the sum of the distances from (x, y) to (-3, 2) and (5, 2) is 12.

7.  Write the equation for the locus of points that are equidistant from the line $x = -2$ and a fixed point $(5, 1)$.

8.  Given $2x^2 + 2y^2 - 20x + 4y + 34 = 0$.
    a.  Write the equation in standard form.
    b.  Graph the curve.
    c.  Label the key features and find the eccentricity.
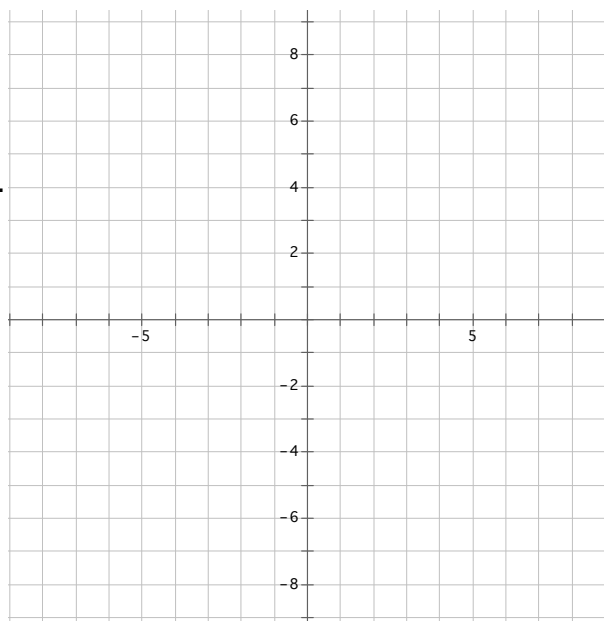


9.  Mrs. Long is using a piece of string that is 24 inches long to draw an ellipse.  She would like the ellipse to have an eccentricity of .5.  Write 2 different equations that could model her ellipse if it were centered at (0,0).