

Unit 6 Practice Test

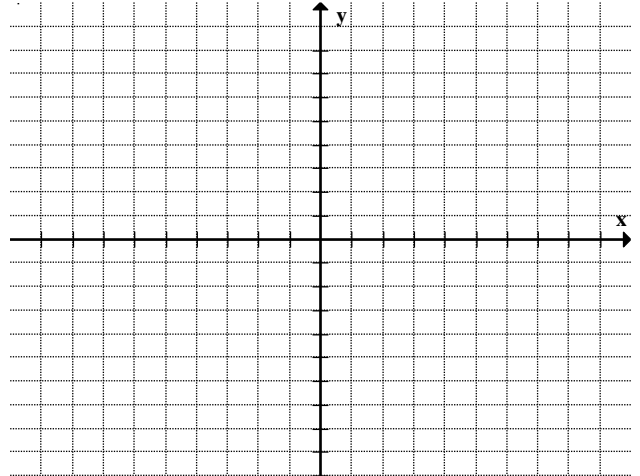
Complete the problems below, show your work, and write your answer in the blank provided.

Target 6.1

I can write the equation for and graph circles, ellipses, and hyperbolas.

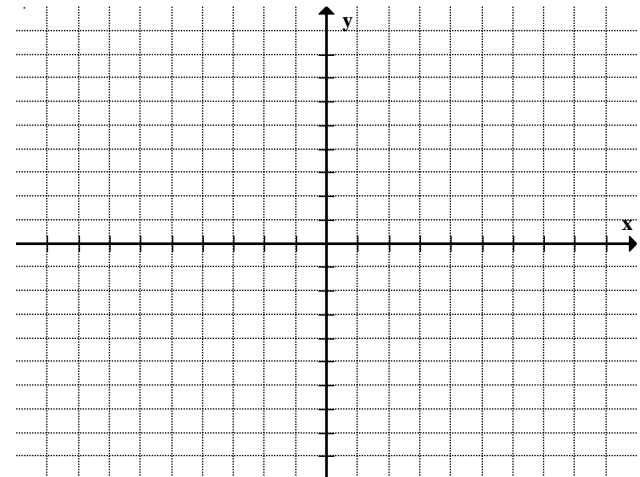
1. a. Graph this circle and state the coordinates of the center and the radius.

$$(x - 3)^2 + (y + 1)^2 = 16$$



- b. Graph this ellipse. State the coordinates of the center, the values of a , b , and c .

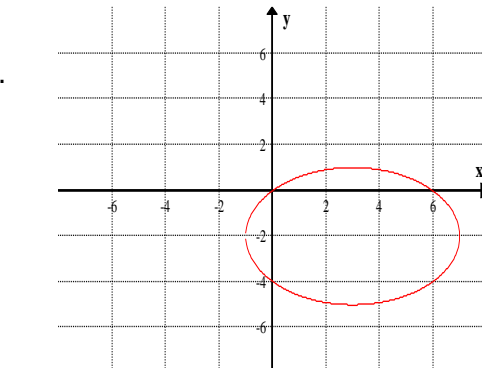
$$\frac{(x+1)^2}{25} - \frac{(y-3)^2}{16} = 1$$



2. Write the equations in standard form and identify the type of conic it is.

$$x^2 + y^2 + 6x - 8y + 20 = 0$$

$$x^2 + 8y^2 + 6x - 7 = 0$$



3. Write the equation for the ellipse graphed at the right. Calculate its focal distance.

Application

4. The orbit of Halley's comet is 36.18 AU long and 9.12 AU wide. What is its eccentricity?