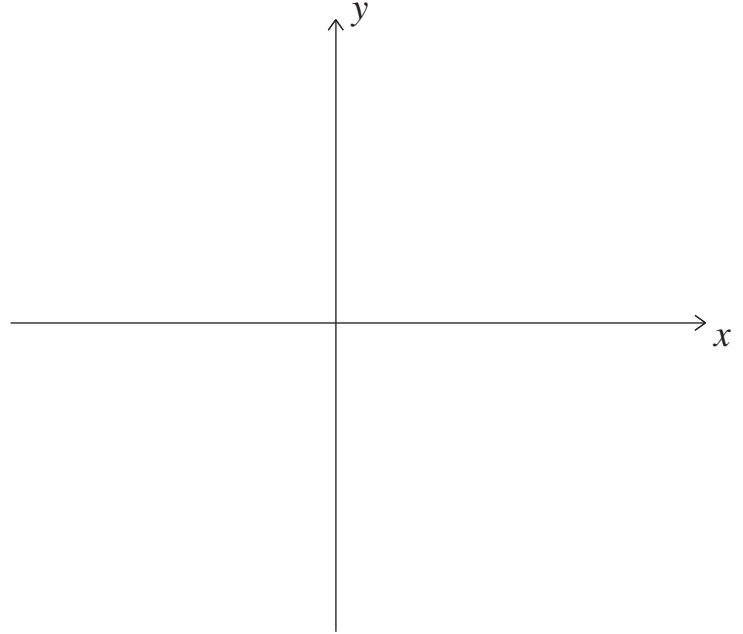


Quiz

Name

1. An ellipse is given by the equation $\frac{x^2}{5^2} + \frac{y^2}{3^2} = 1$. Find the distance between the two focal points. Then sketch the ellipse and its focal points carefully on the coordinate plane below.



2. The graph of the equation $x^2 + 6x + y^2 - 4y - 36$ is a circle. Find the center and the radius of this circle (by completing squares).

3. A 10 foot long ladder leaning against a vertical wall is sliding on the slippery horizontal surface that supports it. The figure illustrates what is happening in the context of an x-y co-ordinate system. The point $P = (x, y)$ in the figure is the midpoint of the ladder. Determine an equation that the co-ordinates of the moving point P satisfy.