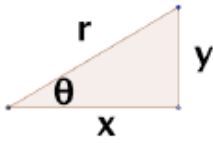


- Plot polar points with pos/neg r 's and θ 's
- Give several polar coordinates to describe one point
- Know how to convert points and equations from polar to rectangular and rectangular to polar using the following conversions:

Rectangular coordinates (x, y) relate to polar coordinates $[r, \theta]$ as follows:

$$x = r \cos \theta \qquad y = r \sin \theta$$
$$\tan \theta = \frac{y}{x} \qquad r^2 = x^2 + y^2$$


- Know how to graph polar equations by graphing the wave graph first, then plotting points. If it is a petal graph, use the wave graph to plot the first petal, then use the number of petals (c if c is odd, $2c$ if c is even) to figure out how far apart the petals should be.
- Know how a , b and c affect the graphs of $r = a + b \sin c\theta$ and $r = a + b \cos c\theta$
- Be able to match polar equations to their graphs.