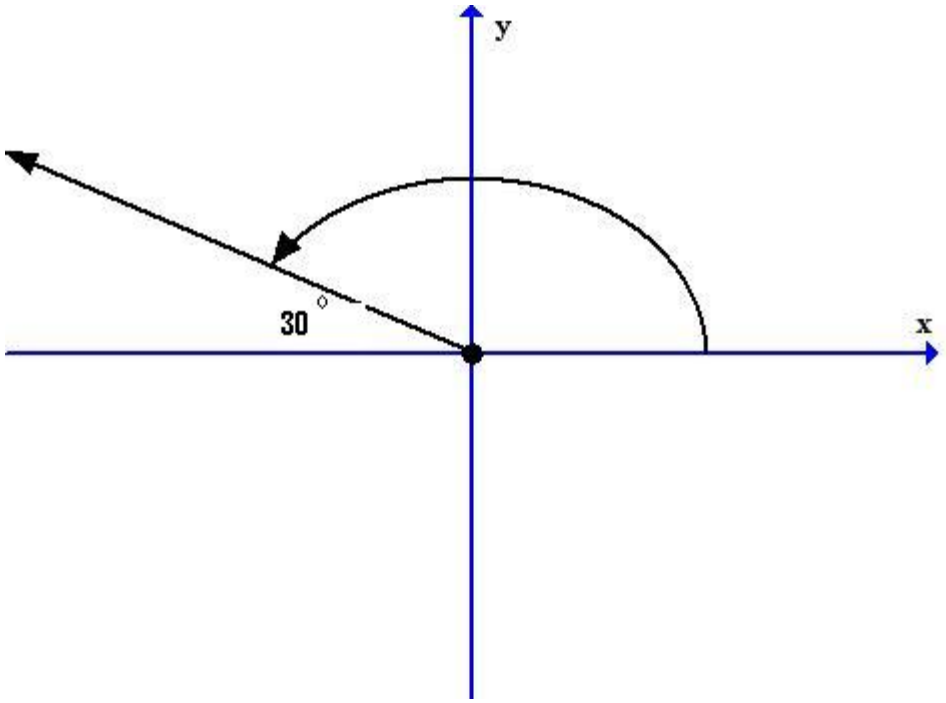
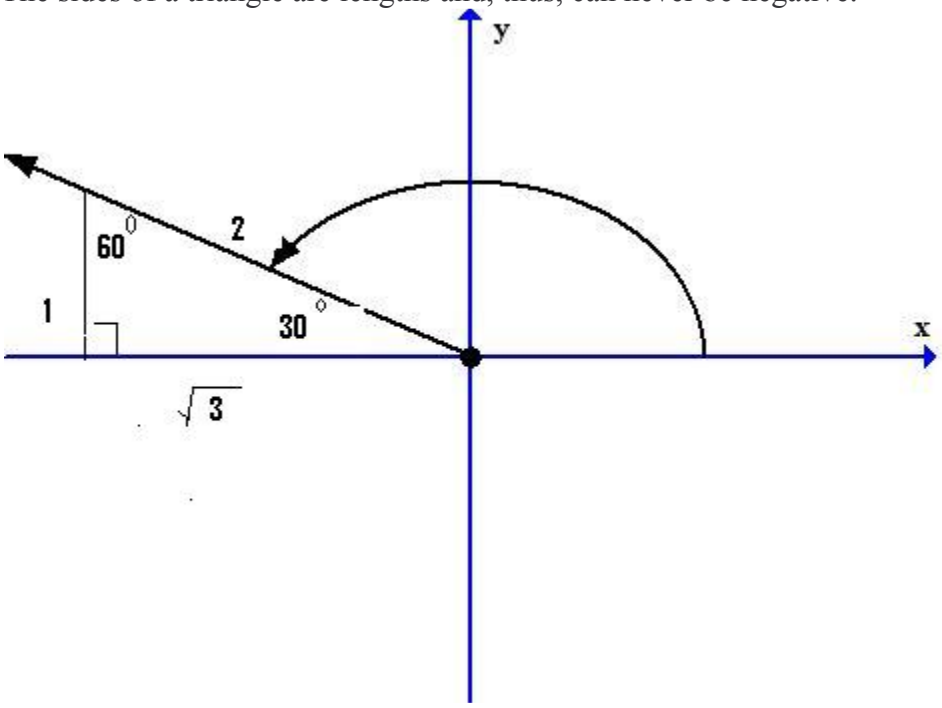
Supposed we are asked to find $\cos\frac{5\pi}{6}$. Here is the work you are required to show.

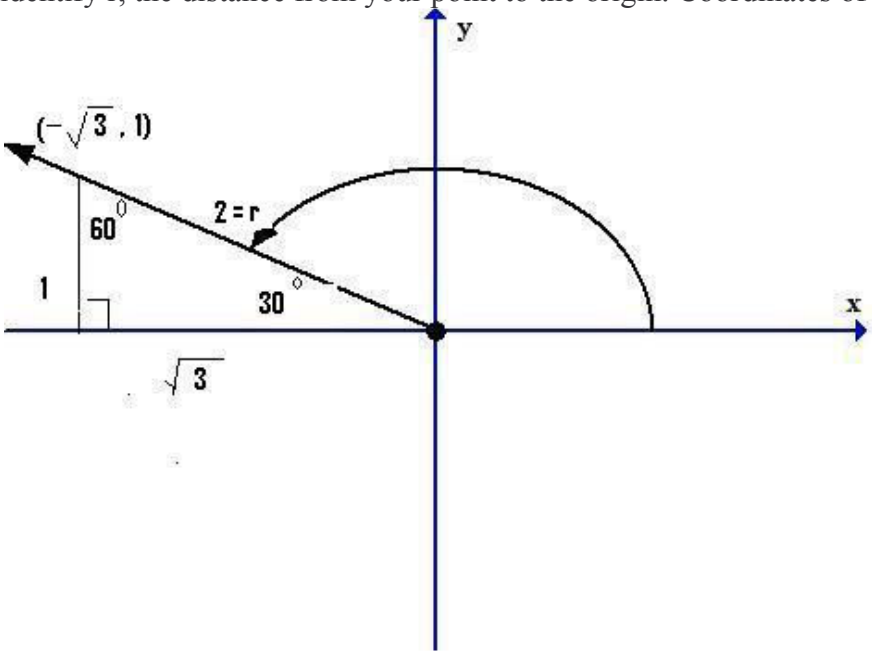
Step 1: Draw the angle.



Step 2: Drop a perpendicular to the x-axis to create your reference triangle. If it is a 30-60-90 triangle, label the side opposite the 30° degree angle 1, the side opposite the 60° degree angle $\sqrt{3}$, and the hypotenuse 2. If it is a 45-45-90 triangle, label each leg 1 and the hypotenuse $\sqrt{2}$. The sides of a triangle are lengths and, thus, can never be negative.



Step 3: Write down the coordinates of the arbitrary point on the terminal side of your angle and identify r, the distance from your point to the origin. Coordinates of points may be negative.



Step 4: Use the memorized definition of cosine:

$$\cos\frac{5\pi}{6} = \frac{x}{r}$$

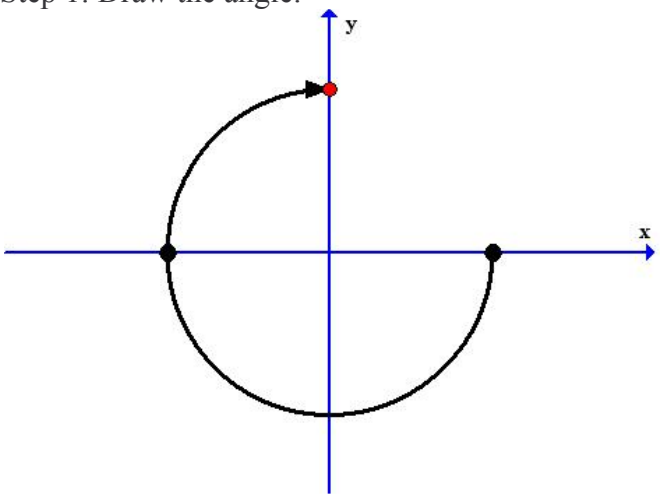
Step 5: Substitute in the values of x and r and, if possible reduce.

$$\cos\frac{5\pi}{6} = \frac{x}{r} = \frac{-\sqrt{3}}{2}$$

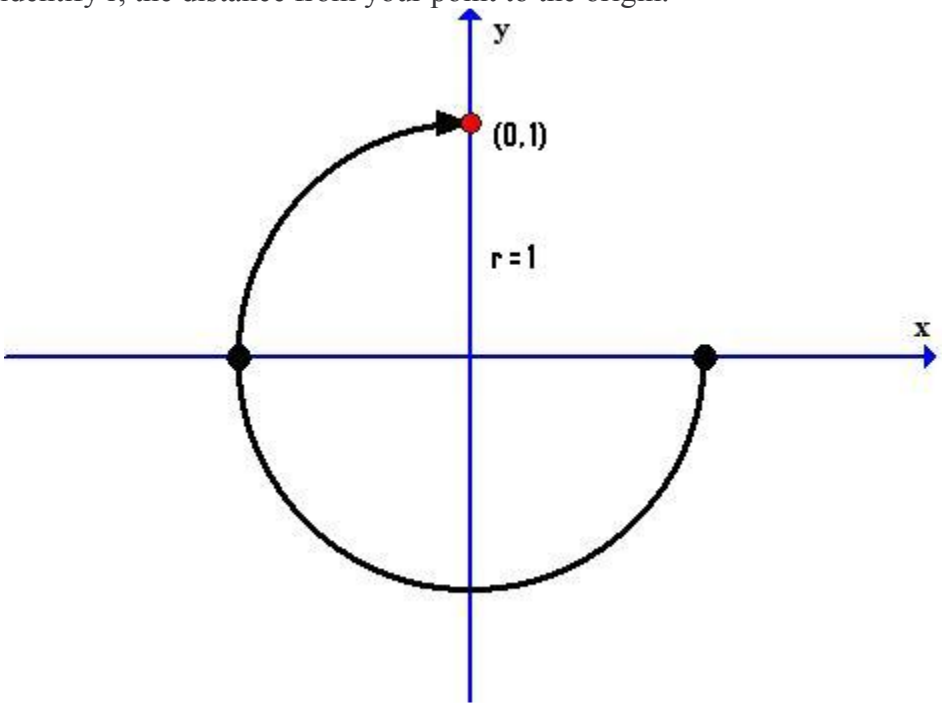
If the angle is quadrantal, the work is slightly different since there is no reference triangle.

Supposed we are asked to find $\cot\left(-\frac{3\pi}{2}\right)$. Here is the work you are required to show.

Step 1: Draw the angle.



Step 2: Write down the coordinates of the arbitrary point on the terminal side of your angle and identify r, the distance from your point to the origin.



Step 3: Use the memorized definition of cotangent:

$$\cot\left(-\frac{3\pi}{2}\right)=\frac{x}{y}$$

Step 4: Substitute in the values of x and y and, if possible reduce.

$$\cot\left(-\frac{3\pi}{2}\right)=\frac{x}{y}=\frac{0}{1}=0$$