The **unit circle** is the circle of radius 1 centered at the origin in the xy-plane. Its equation is $x^2 + y^2 = 1$.

Show the point $(\frac{3}{4}, \frac{\sqrt{7}}{4})$ is on the unit circle.

Terminal Points on the Unit Circle

If $t = \pi, \frac{3\pi}{2}, -5\pi$, or any real number, then we could mark off the distance $t$ along the unit circle, starting at the point $(1,0)$ and moving counterclockwise (if $t$ is positive).

Find the coordinates of the point on the unit circle.

Find the terminal points for each of the following:

a. $t = -\frac{\pi}{4}$

b. $t = \frac{5\pi}{6}$
Reference Number: the reference number is the shortest distance along the unit circle between \( t \) and the x-axis.

Find the reference numbers for each of the following:

- a. \( t = -\frac{2\pi}{3} \)
- b. \( t = \frac{10\pi}{3} \)
- c. \( t = -\frac{15\pi}{2} \)
- d. \( t = -\frac{9\pi}{4} \)