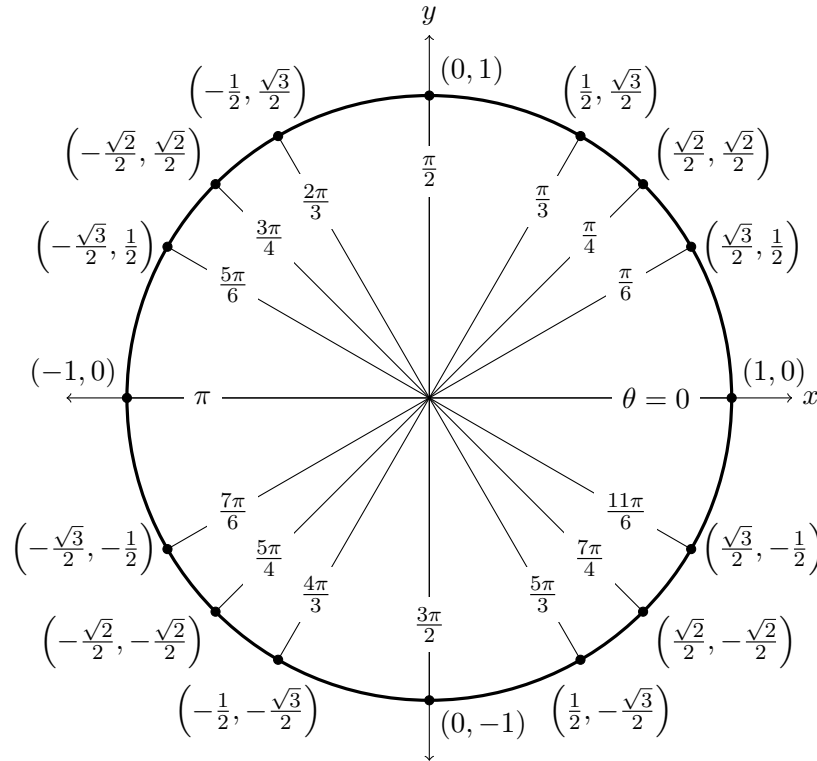


**Unit circle:** The coordinates of the endpoints satisfy  $(x, y) = (\cos \theta, \sin \theta)$ , where  $\theta$  is the corresponding angle.



**Common Maclaurin series:**

$$\frac{1}{1-x} = \sum_{n=0}^{\infty} x^n, \quad R = 1$$

$$e^x = \sum_{n=0}^{\infty} \frac{x^n}{n!}, \quad R = \infty$$

$$\sin x = \sum_{n=0}^{\infty} (-1)^n \frac{x^{2n+1}}{(2n+1)!}, \quad R = \infty$$

$$\cos x = \sum_{n=0}^{\infty} (-1)^n \frac{x^{2n}}{(2n)!}, \quad R = \infty$$

$$\tan^{-1} x = \sum_{n=0}^{\infty} (-1)^n \frac{x^{2n+1}}{2n+1}, \quad R = 1$$

$$\ln(1+x) = \sum_{n=1}^{\infty} (-1)^{n-1} \frac{x^n}{n}, \quad R = 1$$