y = sin(x)

Domain = (−∞ , ∞)
Range = [ −1, 1 ]
Period = 2π
x-intercepts: x = kπ, k is any integer

y = cos(x)

Domain = (−∞ , ∞)
Range = [ −1, 1 ]
Period = 2π
x-intercepts: x = ±π/2 + 2k π, k is any integer
GRAPHS OF BASIC TRIGONOMETRIC FUNCTIONS

**y = csc(x) = \( \frac{1}{\sin(x)} \)**

Domain = \{ x | x ≠ k\(\pi\), where k is any integer \}

Range = \{ y | y ≤ –1 or y ≥ 1 \}

Period = 2\(\pi\)

x-intercepts: None

**y = sec (x) = \( \frac{1}{\cos(x)} \)**

Domain = \{ x | x ≠ \(\frac{\pi}{2}\) + k\(\pi\), where k is any integer \}

Range = \{ y | y ≤ –1 or y ≥ 1 \}

Period = 2\(\pi\)

x-intercepts: None
**GRAPHS OF BASIC TRIGONOMETRIC FUNCTIONS**

\[ y = \tan(x) = \frac{\sin(x)}{\cos(x)} \]

**Domain** = \{ \( x \mid x \neq \frac{\pi}{2} + k\pi \), where \( k \) is any integer \}

**Range** = (−\( \infty \), \( \infty \))

**Period** = \( \pi \)

**x-intercepts:** \( x = k\pi \), \( k \) is any integer

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\[ y = \cot(x) = \frac{\cos(x)}{\sin(x)} \]

**Domain** = \{ \( x \mid x \neq k\pi \), where \( k \) is any integer \}

**Range** = (−\( \infty \), \( \infty \))

**Period** = \( \pi \)

**x-intercepts:** \( x = \frac{\pi}{2} + k\pi \), \( k \) is any integer

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Pinnacle Learning Lab, by Joanna Gutt-Lehr, last updated 1/2009