

TRIGONOMETRIC FUNCTIONS REFERENCE

Standard Form: $y = A \sin(B(x - C)) + D$

$$f(x) = \sin(x)$$

Domain: $(-\infty, \infty)$

Range: $[-1, 1]$

Period: 2π

Amplitude: 1

$$f(x) = \cos(x)$$

Domain: $(-\infty, \infty)$

Range: $[-1, 1]$

Period: 2π

Amplitude: 1

A (Amplitude): Vertical stretch/compression.

B (Period Factor): Period = $2\pi / |B|$.

C (Phase Shift): Horizontal shift.

D (Vertical Shift): Midline of the graph.

$$f(x) = \tan(x)$$

Period: π

Vertical Asymptotes: $\pi/2 + n\pi$

Key Coordinates (x, y)

0 (0 rad) (1, 0)

30 ($\pi/6$) ($\sqrt{3}/2$, $1/2$)

45 ($\pi/4$) ($\sqrt{2}/2$, $\sqrt{2}/2$)

60 ($\pi/3$) ($1/2$, $\sqrt{3}/2$)

90 ($\pi/2$) (0, 1)