

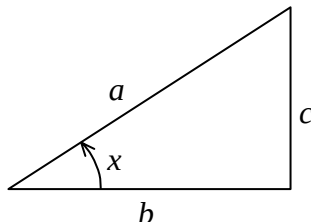
Fórmulas básicas de trigonometría

Definiciones y relaciones básicas

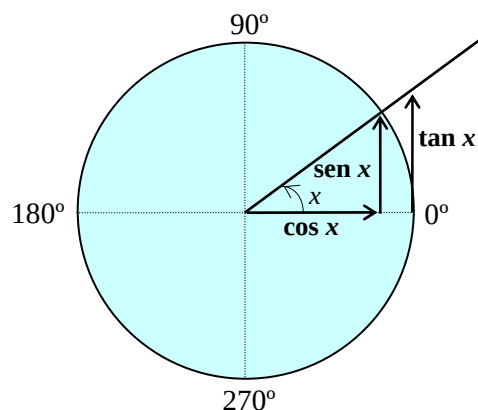
$$\operatorname{sen} x = \frac{\text{cateto opuesto}}{\text{hipotenusa}} = \frac{c}{a}$$

$$\cos x = \frac{\text{cateto contiguo}}{\text{hipotenusa}} = \frac{b}{a}$$

$$\tan x = \frac{\text{cateto opuesto}}{\text{cateto contiguo}} = \frac{c}{b}$$



Circunferencia trigonométrica



$$\operatorname{sen}^2 x + \cos^2 x = 1 \quad 1 + \tan^2 x = \frac{1}{\cos^2 x} \quad \tan x = \frac{\operatorname{sen} x}{\cos x}$$

$$\sec x = \frac{1}{\cos x} \quad \operatorname{cosec} x = \frac{1}{\operatorname{sen} x} \quad \cotan x = \frac{\cos x}{\operatorname{sen} x} = \frac{1}{\tan x}$$

Razones trigonométricas de los ángulos principales

°	0°	30°	45°	60°	90°	120°	135°	150°	180°	210°	225°	240°	270°	300°	315°	330°	360°
Rad	0	$\pi/6$	$\pi/4$	$\pi/3$	$\pi/2$	$2\pi/3$	$3\pi/4$	$5\pi/6$	π	$7\pi/6$	$5\pi/4$	$4\pi/3$	$3\pi/2$	$5\pi/3$	$7\pi/4$	$11\pi/6$	2π
sen x	0	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0	$-\frac{1}{2}$	$-\frac{\sqrt{2}}{2}$	$-\frac{\sqrt{3}}{2}$	-1	$-\frac{\sqrt{3}}{2}$	$-\frac{\sqrt{2}}{2}$	$-\frac{1}{2}$	0
cos x	1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0	$-\frac{1}{2}$	$-\frac{\sqrt{2}}{2}$	$-\frac{\sqrt{3}}{2}$	-1	$-\frac{\sqrt{3}}{2}$	$-\frac{\sqrt{2}}{2}$	$-\frac{1}{2}$	0	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	1
tan x	0	$\frac{\sqrt{3}}{3}$	1	$\sqrt{3}$	∞	$-\sqrt{3}$	-1	$-\frac{\sqrt{3}}{3}$	0	$\frac{\sqrt{3}}{3}$	1	$\sqrt{3}$	∞	$-\sqrt{3}$	-1	$-\frac{\sqrt{3}}{3}$	0

Cuadrantes y signos

Cuadrantes	sen x	cos x	tan x