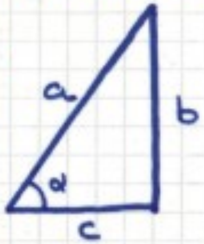
TRIGONOMETRIA • 2º

TRIANGULO RECTANGULO



$\operatorname{sen}\alpha = \dfrac{b}{a}$

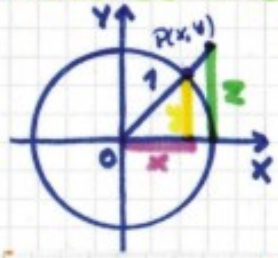
$\cos\alpha = \dfrac{c}{a}$

$\operatorname{tg}\alpha = \dfrac{b}{c}$

Teor. Pitágoras:
$a^2 = b^2 + c^2$

AREA: $S = \dfrac{b \cdot c}{2}$

RAZONES TRIGONOMETRICAS



$\operatorname{sen}\alpha = y$

$\cos\alpha = x$

$\operatorname{tg}\alpha = z$

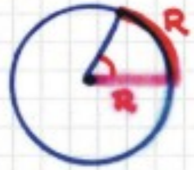
SIGNOS

COSENO de α =
$= \text{seno } \underbrace{(90 - \alpha)}_{\text{COMPLEMENTARIO}}$

MEDIDA DE ANGULOS

SEX
GRADOS SEXAGESIMALES

RAD
RADIANES



GRA
GRADOS CENTESIMALES

(NO SE USA)

1 rad = 57º 17' 44"

2π rad = 360º

$\boxed{\pi \text{ rad} = 180º}$

FORMULAS

$\operatorname{tg}\alpha = \dfrac{\operatorname{sen}\alpha}{\cos\alpha}$

$\operatorname{sen}^2\alpha + \cos^2\alpha = 1$

$1 + \operatorname{tg}^2\alpha = \dfrac{1}{\cos^2\alpha}$

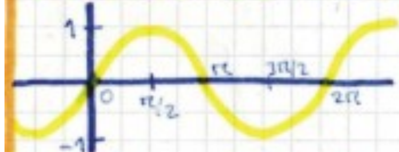
RAZONES INVERSAS

$\operatorname{ctg}\alpha = \dfrac{1}{\operatorname{tg}\alpha}$

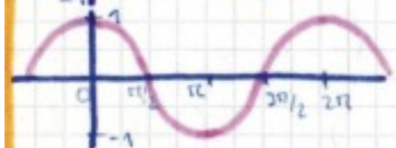
$\sec\alpha = \dfrac{1}{\cos\alpha}$

$\operatorname{cosec}\alpha = \dfrac{1}{\operatorname{sen}\alpha}$

FUNCIONES TRIGONOMETRICAS Ó CIRCULARES

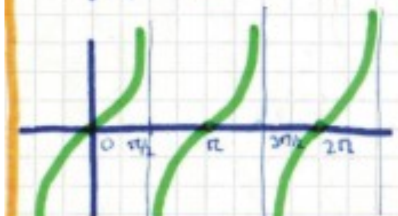


$y = \operatorname{sen} x$



$y = \cos x$

continuas
acotadas entre −1, 1
Periodo 2π
Desplazadas 90º



$y = \operatorname{tg} x$

No continua en $\pi/2$, $3\pi/2$
No acotada
Periodo π

VALORES NOTABLES

RAD	0	$\pi/6$	$\pi/4$	$\pi/3$	$\pi/2$	π	$3\pi/2$	2π
DEG	0	30º	45º	60º	90º	180º	270º	360º
sen	0	1/2	$\sqrt{2}/2$	$\sqrt{3}/2$	1	0	−1	0
cos	1	$\sqrt{3}/2$	$\sqrt{2}/2$	1/2	0	−1	0	1
tg	0	$\sqrt{3}/3$	1	$\sqrt{3}$	∞	0	$-\infty$	0