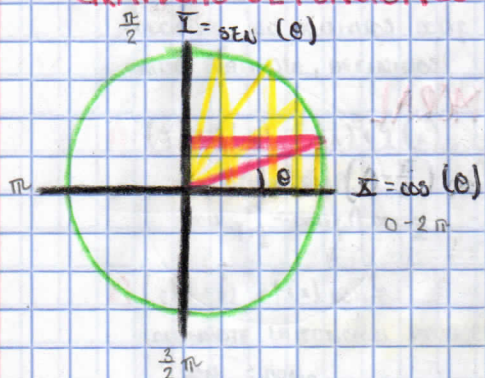
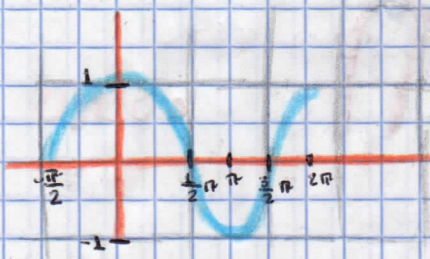
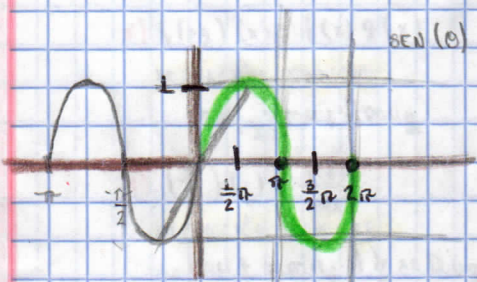


GRÁFICAS DE FUNCIONES TRIGONOMÉTRICAS.



OBS
 PAR $f(x) = f(-x)$
 IMPAR $-f(x) = f(-x)$

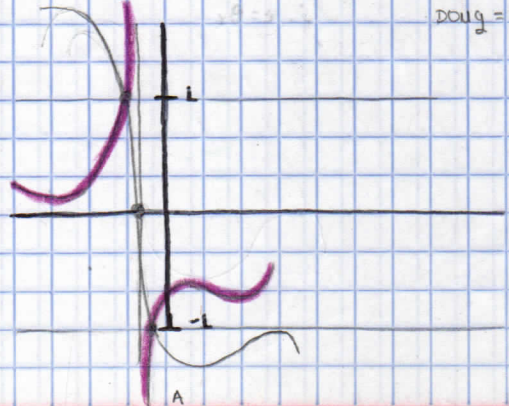


$sen(\theta) = cos(\frac{\pi}{2} - \theta)$

DEM:
 $cos(\frac{\pi}{2} - \theta) = cos(\frac{\pi}{2})cos(-\theta) - sen(\frac{\pi}{2})sen(\theta)$
 $= 0 \cdot cos(-\theta) - (1)sen(\theta)$
 $= -sen(\theta) = sen(\theta)$

* RECORDAR TEOREMA DE PITÁGORAS

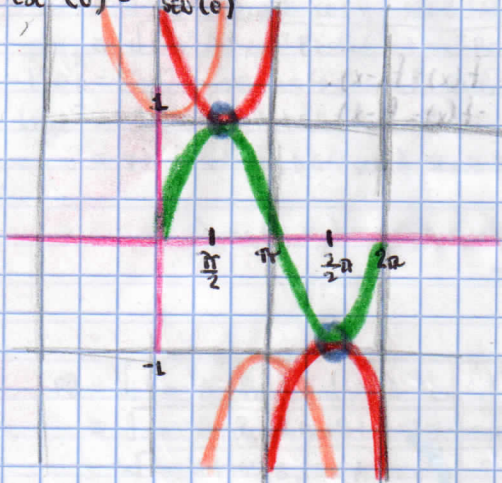
SEN $f(x)$ UNA FUNCIÓN
 $g(x) = \frac{1}{f(x)}$



$DOM f = DOM g - \{x \mid f(x) = 0\}$

$$\sec(\theta) = \frac{1}{\cos(\theta)}$$

$$\csc(\theta) = \frac{1}{\sen(\theta)}$$



TAREA MORAL

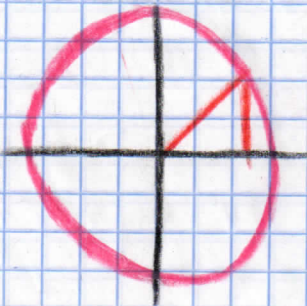
$$\sec(\theta) = \csc\left(\frac{\pi}{2} - \theta\right)$$

• SENO

$$\cos(\theta) = L = \sen\left(\frac{\pi}{2} - \theta\right)$$

TAREA

TANGENTE y COTANGENTE



$$x \cos(\alpha) \leq \sen(\alpha) \leq x$$



Obs.

$$\text{si } \theta = 2\pi \Rightarrow c = 2\pi r$$

$$\theta \rightarrow c = \frac{\theta}{2\pi} \cdot 2\pi r = \frac{\theta}{2\pi} (2\pi r)$$

$$\therefore c = \theta r$$

DEF. SEAN f, g FUNCIONES, con DOMINIOS $\text{dom } f$ y $\text{dom } g$
RESPECTIVAMENTE, DEFINIMOS

1) $(f+g)(x) = f(x) + g(x)$

LA FUNCIÓN SUMA

$\text{dom } f+g = \text{dom } f \cap \text{dom } g$

2) $(cf)(x) = cf(x)$ con c

CONSTANTE LA FUNCIÓN PRODUCTO POR ESCALAR

$\text{dom } cf = \text{dom } f$

3) $(f \cdot g)(x) = f(x) \cdot g(x)$

LA FUNCIÓN PRODUCTO

$\text{dom } f \cdot g = \text{dom } f \cap \text{dom } g$

4) $\left(\frac{f}{g}\right)(x) = \frac{f(x)}{g(x)}$

LA FUNCIÓN COCIENTE

$\text{dom } \frac{f}{g} = \text{dom } f \cap \{x \in \text{dom } g \mid g(x) \neq 0\}$

$f(x) = x - 3 \quad x \in \{3, 4, 5\}$

$g(x) = x^2 \quad x \in \mathbb{R}$

OBS.

NO SABES QUIEN ES $f(0)$.

$(f+g)(0) = f(0) + g(0)$

• $(f+g)(x) = x^2 + x - 3$

• $\text{Dom } f+g = \{3, 4, 5\}$

• $\frac{f}{g}(x) = \left\{ \left(3, 0\right) \left(4, \frac{1}{4}\right) \left(5, \frac{2}{25}\right) \right\}$