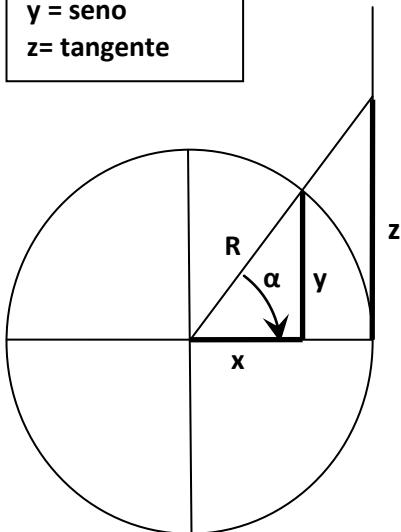


# FUNCIONES TRIGONÓMICAS

x = coseno  
y = seno  
z = tangente



VALOR DEL RADIO (R) = 1

## TRIGONOMETRÍA PLANA

$$\text{sen } \alpha = y/R$$

$$\text{cos } \alpha = x/R$$

$$\text{tag } \alpha = \text{sen } \alpha / \text{cos } \alpha$$

### INVERSAS

$$\text{Cosecante } \alpha = 1 / \text{sen } \alpha$$

$$\text{Secante } \alpha = 1 / \text{cos } \alpha$$

$$\text{Cotangente } \alpha = 1 / \text{tag } \alpha$$

## TRIGONOMETRÍA ESFÉRICA

### Teorema del seno

$$\text{sen } a / \text{sen } A = \text{sen } b / \text{sen } B = \text{sen } c / \text{sen } C$$

### Teorema del coseno

$$\text{cos } a = \text{cos } b \times \text{cos } c + \text{sen } b \times \text{sen } c \times \text{cos } A$$

$$\text{cos } b = \text{cos } a \times \text{cos } c + \text{sen } a \times \text{sen } c \times \text{cos } B$$

$$\text{cos } c = \text{cos } a \times \text{cos } b + \text{sen } a \times \text{sen } b \times \text{cos } C$$

dado que:

$$\text{cos } dz = \text{sen } a$$

$$\text{cos } \Delta = \text{sen } d$$

$$\text{cos } cd = \text{sen } le$$

$$\text{sen } ae = \text{sen } d \times \text{sen } le + \text{cos } d \times \text{cos } le \times \text{cos } P$$

### Teorema de la cotangente

$$\text{cotg } a \text{ sen } b = \text{cos } b \times \text{cos } C + \text{sen } C \times \text{cotg } A$$

se actúa de la misma manera

$$\text{cot } Z = \text{cos } le (\text{tg } d / \text{sen } P - \text{tag } le / \text{tag } P)$$

