

## REDUCCION AL PRIMER CUADRANTE II

1. Ejemplos:

- ▶  $\text{Sen}100^\circ = + \text{Sen}(180^\circ - 100^\circ) = \text{Sen}80^\circ = \text{Cos}10^\circ$
- ▶  $\text{Cos}130^\circ = -\text{Cos}(180^\circ - 130^\circ) = -\text{Cos}50^\circ = -\text{Sen}40^\circ$
- ▶  $\text{Tan}142^\circ = -\text{Tan}(180^\circ - 142^\circ) = -\text{Tan}38^\circ = -\text{Cot}52^\circ$
- ▶  $\text{Cot}168^\circ = -\text{Cot}(180^\circ - 168^\circ) = -\text{Cot}12^\circ = -\text{Tan}78^\circ$
- ▶  $\text{Sen}190^\circ = -\text{Sen}(190^\circ - 180^\circ) = -\text{Sen}10^\circ = -\text{Cos}80^\circ$
- ▶  $\text{Cos}220^\circ = -\text{Cos}(220^\circ - 180^\circ) = -\text{Cos}40^\circ = -\text{Sen}50^\circ$
- ▶  $\text{Tan}236^\circ = +\text{Tan}(236^\circ - 180^\circ) = \text{Tan}56^\circ = \text{Cot}34^\circ$
- ▶  $\text{Cos}280^\circ = + \text{Cos}(360^\circ - 280^\circ) = \text{Cos}80^\circ$
- ▶  $\text{Tan}290^\circ = -\text{Tan}(360^\circ - 290^\circ) = -\text{Tan}70^\circ$
- ▶  $\text{Cot}344^\circ = -\text{Cot}(360^\circ - 344^\circ) = -\text{Cot}16^\circ$

2. Calcula:

$$E = \text{Sen}(-3645^\circ)$$

Resolución:

i)  $\text{Sen}(-\theta) = -\text{Sen}\theta$

ii)  $3645^\circ \begin{array}{l} | 360^\circ \\ \hline 3600^\circ | 10^\circ \\ \hline 45^\circ \end{array}$

iii)  $\text{Sen}(-3645^\circ) = -\text{Sen}3645^\circ$

$$\text{Sen}(-3645^\circ) = -\text{Sen}45^\circ$$

$$\text{Sen}(-3645^\circ) = -\frac{\sqrt{2}}{2}$$

3. Simplifica:

$$E = \frac{\text{Sen}(180^\circ + x)}{\text{Sen}(360^\circ - x)} + \frac{\text{Sec}(90^\circ - x)}{\text{Csc}(180^\circ + x)}$$

Resolución:

$$E = \frac{\begin{array}{c} \text{IIC} \\ \downarrow \\ -\text{Sen}x \\ \uparrow \\ \text{IVC} \end{array}}{-\text{Sen}x} + \frac{\begin{array}{c} \text{IC} \\ \downarrow \\ +\text{Csc}x \\ \uparrow \\ \text{IIC} \end{array}}{-\text{Csc}x}$$

$$E = 1 - 1$$

$$E = 0$$

**EJERCICIOS DE APLICACIÓN**

1.Reducir:  $E = \frac{\text{Sen}(-x)}{\text{Sen } x} + \frac{\text{Cos}(-x)}{-\text{Cos } x}$

E= \_\_\_\_\_ + \_\_\_\_\_

E= \_\_\_\_\_ + \_\_\_\_\_

E= \_\_\_\_\_

2. Calcular el valor de  $A = \text{Cos } 120. \text{sen}330^\circ$

- Reducción al 1er cuadrante de  $\text{Cos } 120^\circ =$
- Reducción al 1er cuadrante de  $\text{Sen } 330^\circ =$

$A = \text{Cos } 120 \times \text{Sen } 330^\circ$

A = \_\_\_\_\_ x \_\_\_\_\_

A = \_\_\_\_\_ x \_\_\_\_\_

A = \_\_\_\_\_

3. Calcular el valor de:  $E = \text{Sen } 150^\circ - \text{Cos } 120^\circ + \text{Tg } 135^\circ$

- Reducción al 1er cuadrante de  $\text{Sen } 150^\circ =$
- Reducción al 1er cuadrante de  $\text{Cos } 120^\circ =$
- Reducción al 1er cuadrante de  $\text{Tg } 135^\circ =$

$E = \text{Sen } 150^\circ - \text{Cos } 120^\circ + \text{Tg } 135^\circ$

E = \_\_\_\_\_ - \_\_\_\_\_ + \_\_\_\_\_

E = \_\_\_\_\_ + \_\_\_\_\_ - \_\_\_\_\_

E = \_\_\_\_\_

4. Calcular:  $E = \frac{\text{Sen}(-37^\circ)}{\text{Cos}(-60^\circ)} + \frac{\text{Csc}(-30^\circ)}{\text{Sec}(-53^\circ)}$

E = \_\_\_\_\_ + \_\_\_\_\_

E = \_\_\_\_\_ + \_\_\_\_\_

E = \_\_\_\_\_ + \_\_\_\_\_

E = \_\_\_\_\_