

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)
$$\begin{array}{r} 3645^\circ \quad | \quad 360^\circ \\ \underline{3600^\circ} \quad | \quad 10^\circ \\ 45^\circ \end{array}$$

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:

$$E = \frac{\overset{\text{IIIC}}{\downarrow} \text{Sen}x}{\underset{\text{IVC}}{\uparrow} \text{Sen}x} + \frac{\overset{\text{IC}}{\downarrow} \text{Csc}x}{\underset{\text{IIIC}}{\uparrow} \text{Csc}x}$$

$$E = 1 - 1$$

$$E = 0$$

EJERCICIOS DE APLICACIÓN

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

$E = \text{_____} + \text{_____}$

$E = \text{_____} + \text{_____}$

$E = \text{_____}$

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

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

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

$A = \text{_____} \times \text{_____}$

$A = \text{_____} \times \text{_____}$

$A = \text{_____}$

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 $\text{Tg } 135^\circ =$

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

$E = \text{_____} - \text{_____} + \text{_____}$

$E = \text{_____} + \text{_____} - \text{_____}$

$E = \text{_____}$

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

$E = \text{_____} + \text{_____}$

$E = \text{_____} + \text{_____}$

$E = \text{_____} + \text{_____}$

$E = \text{_____}$