

Clase por Discord- 26 de abril

**Ej 2) d)**

$2x = \frac{\pi}{3} + 2k\pi$	$2x = \frac{\pi}{3}$ <b>Val</b>
$x = \frac{\pi}{6} + k\pi$	$x = \frac{\pi}{6} + 2k\pi$
$K = -1$	$x = \frac{\pi}{6} - \pi = -\frac{5\pi}{6}$
$K = 0$	$x = \frac{\pi}{6}$
$K = 1$	$x = \frac{\pi}{6} + \pi = \frac{7\pi}{6}$

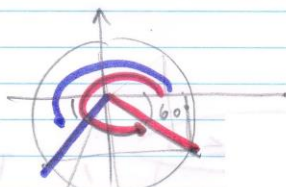
**Verifco**

$\cos\left[2\left(-\frac{5\pi}{6}\right)\right] = \frac{1}{2}$

$\cos\left[2\left(\frac{\pi}{6}\right)\right] = \frac{1}{2}$

$\cos\left[2\left(\frac{7\pi}{6}\right)\right] = \frac{1}{2}$

**Ej 2) e)**



$$\sin 3x = -\frac{\sqrt{3}}{2}$$

$$3x = \frac{4\pi}{3} + 2k\pi$$

$$3x = \frac{5\pi}{3} + 2k\pi$$

$$x = \frac{4\pi}{9} + \frac{2k\pi}{3}$$

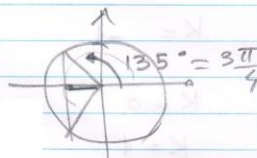
$$x = \frac{5\pi}{9} + \frac{2k\pi}{3}$$

$$x = \frac{4\pi + 6k\pi}{9}$$

$$x = \frac{(4 + 6k)\pi}{9}$$

**Ej 2) f)**

$$\cos \frac{x}{2} = -\frac{\sqrt{2}}{2}$$



$$\frac{x}{2} = \frac{3\pi}{4} + 2k\pi$$

$$x = \frac{3\pi}{2} + 4k\pi$$

$$\frac{x}{2} = \frac{5\pi}{4} + 2k\pi$$

$$x = \frac{5\pi}{2} + 4k\pi$$

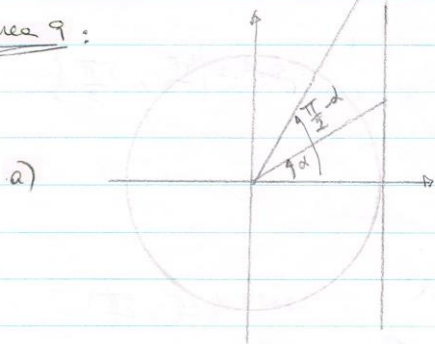
Tarea 8:

a)  $\operatorname{tg} \frac{\pi}{4} = \frac{\frac{\sqrt{2}}{2}}{\frac{\sqrt{2}}{2}} = 1$

b)  $\operatorname{tg} \frac{\pi}{6} = \frac{\frac{1}{2}}{\frac{\sqrt{3}}{2}} = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$

c)  $\operatorname{tg} \frac{2\pi}{3} = \frac{\frac{\sqrt{3}}{2}}{-\frac{1}{2}} = -\sqrt{3}$

Tarea 9:

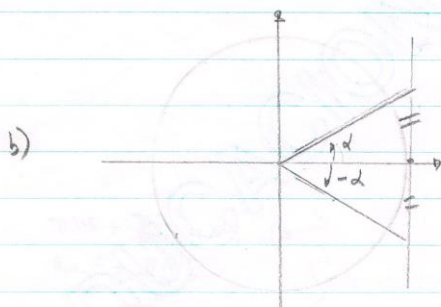


$$\operatorname{tg} \alpha = \frac{\operatorname{sen} \alpha}{\operatorname{cos} \alpha} = \frac{\operatorname{CD}(\frac{\pi}{2} - \alpha)}{\operatorname{sen}(\frac{\pi}{2} - \alpha)} = \frac{1}{\operatorname{tg}(\frac{\pi}{2} - \alpha)}$$

$$\operatorname{tg} \alpha = \frac{1}{\operatorname{tg}(\frac{\pi}{2} - \alpha)}$$

Ej:  
 $\operatorname{tg} 30^\circ = \operatorname{tg} \frac{\pi}{6} = \frac{1}{\sqrt{3}}$

$\frac{\pi}{2} - \frac{\pi}{6} = \frac{3\pi - \pi}{6} = \frac{2\pi - \pi}{6} = \frac{\pi}{3}$   $\operatorname{tg} \frac{\pi}{3} = \frac{\sqrt{3}}{1} = \sqrt{3}$



$$\operatorname{tg} \alpha = -\operatorname{tg}(-\alpha)$$

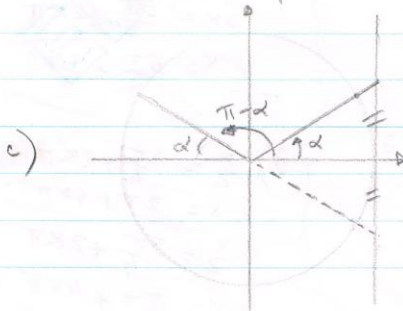
$$\operatorname{tg} \alpha = -\operatorname{tg}(2\pi - \alpha)$$

Ej:

$$\operatorname{tg}(45^\circ) = \operatorname{tg} \frac{\pi}{4} = 1$$

$$\operatorname{tg}(-45^\circ) = \operatorname{tg}(-\frac{\pi}{4}) = -1$$

$$\operatorname{tg}(315^\circ) = \operatorname{tg}(\frac{7\pi}{4}) = -1$$



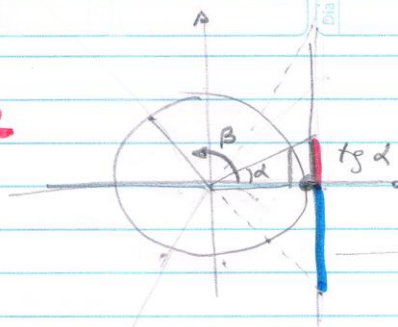
$$\operatorname{tg} \alpha = -\operatorname{tg}(\pi - \alpha)$$

Ej:

$$\operatorname{tg} \frac{\pi}{4} = 1$$

$$\operatorname{tg} \frac{3\pi}{4} = -1$$

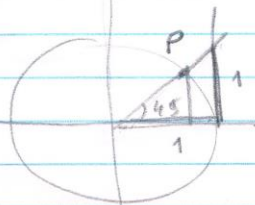
# Tangente



$$\text{tg } 90^\circ = \infty$$

$$\text{tg } \beta$$

$$\text{tg } 45^\circ = 1$$



$$\frac{a}{b} = \frac{b}{a}$$
$$\frac{\cos \alpha}{\sec \alpha} = \frac{1}{\frac{\sec \alpha}{\cos \alpha}} = \text{tg}^{-1} \alpha = \text{tg } \alpha$$

$$\text{tg } 2x = \frac{\text{sen } 2x}{\cos 2x} = 0$$
$$\frac{\text{sen } 2x}{\cos 2x} - \text{sen } 2x = 0$$
$$\text{sen } 2x \cdot \left( \frac{1}{\cos 2x} - 1 \right) = 0$$