

$$a^2 = b^2 + c^2 - 2bc \cos \alpha$$

$$a = b \cos \gamma + c \cos \beta$$

$$b = a \cos \gamma + c \cos \alpha$$

$$c = a \cos \beta + b \cos \alpha$$

$$a^2 = a^2 \cos^2 \gamma + a^2 \cos^2 \beta$$

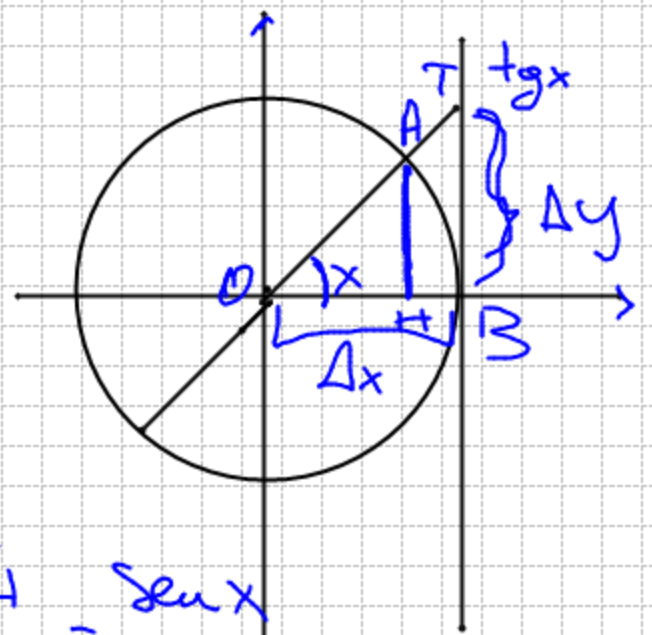
$$-b^2 = -a^2 \cos^2 \gamma - b^2 \cos^2 \alpha$$

$$-c^2 = -a^2 \cos^2 \beta - b^2 \cos^2 \alpha$$

$$a^2 - b^2 - c^2 = -2bc \cos \alpha$$

$$a^2$$

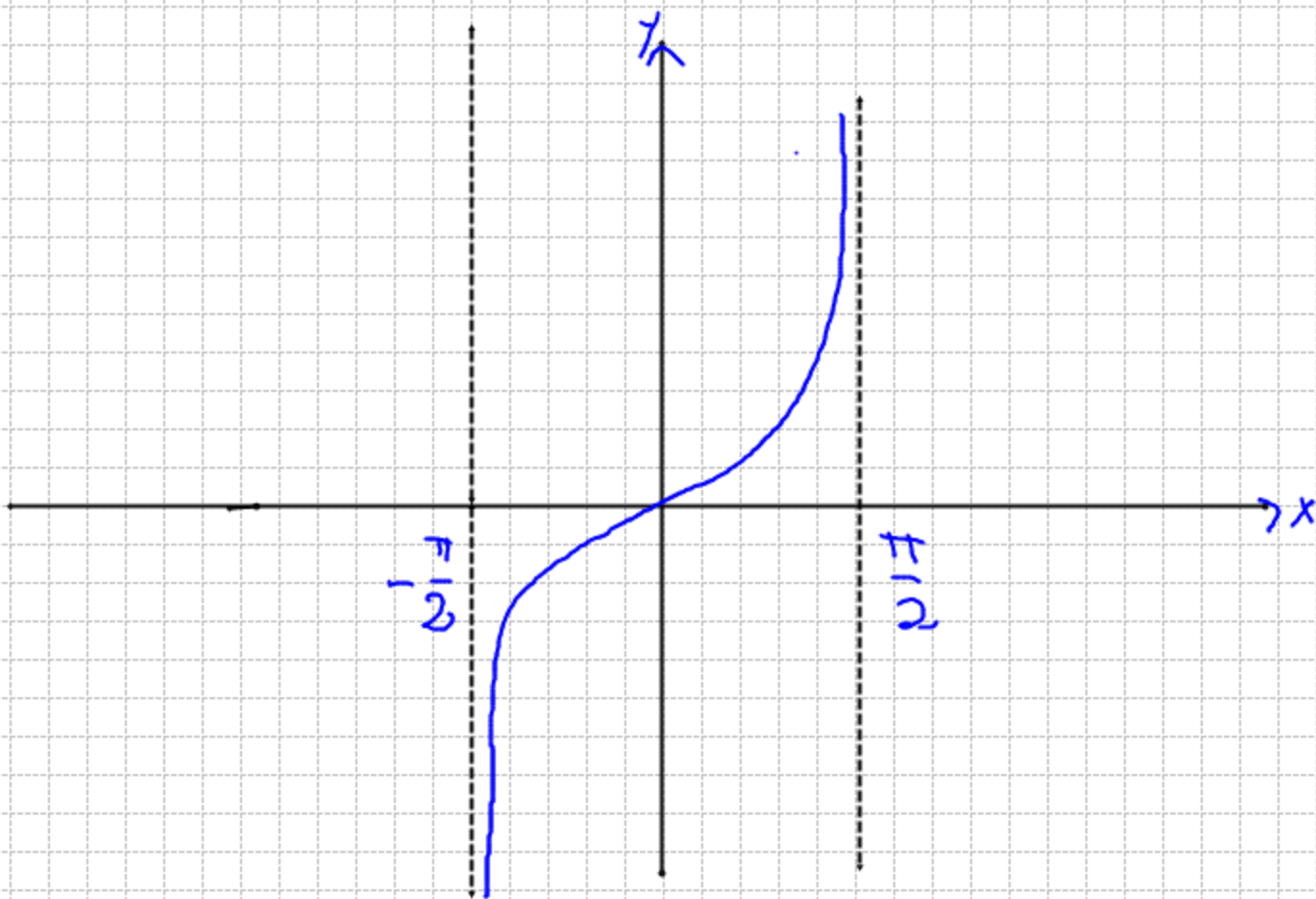
$$\operatorname{tg} x = \frac{\operatorname{sen} x}{\cos x}$$



$$m = \frac{\Delta y}{\Delta x} \rightarrow$$

$$\triangle OBT \sim \triangle OHA$$

$$\frac{\Delta y}{\Delta x} = \frac{\operatorname{tg} x}{1} = \frac{AH}{OH} = \frac{\operatorname{sen} x}{\cos x}$$



$$\cos 3x + 2 \operatorname{sen} 3x = 1$$

$$3x = t$$

$$\cos t + 2 \operatorname{sen} t = 1$$

$$\cos t = X$$

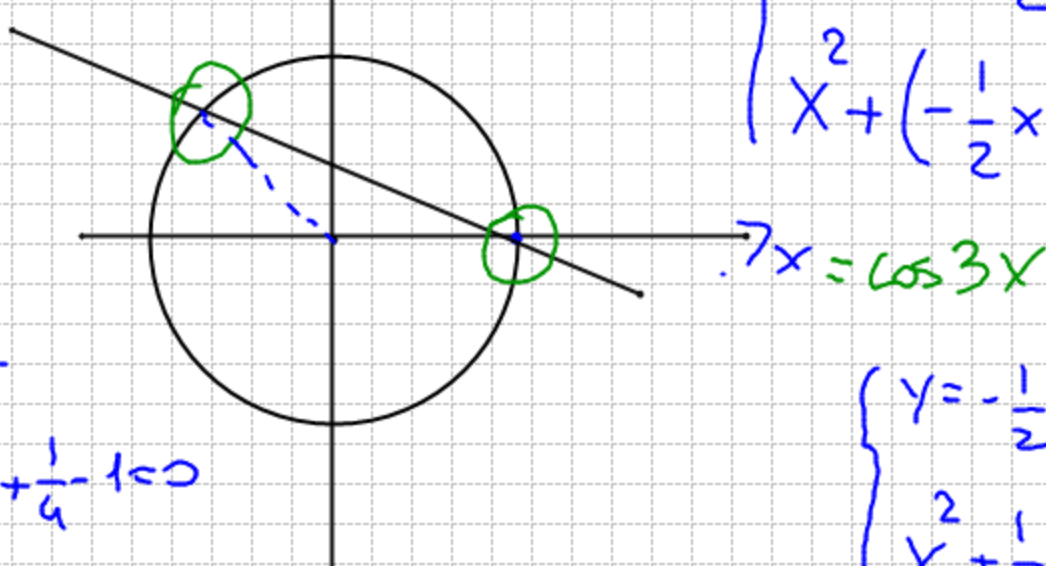
$$\operatorname{sen} t = Y$$

$$\begin{cases} X + 2Y = 1 \\ X^2 + Y^2 = 1 \end{cases} \begin{cases} Y = \frac{1-X}{2} \\ X^2 + Y^2 = 1 \end{cases} \quad Y = -\frac{1}{2}X + \frac{1}{2}$$

$$Y = \operatorname{sen} 3x$$

$$\begin{cases} Y = -\frac{1}{2}X + \frac{1}{2} \\ X^2 + \left(-\frac{1}{2}X + \frac{1}{2}\right)^2 = 1 \end{cases}$$

$$\begin{cases} Y = -\frac{1}{2}X + \frac{1}{2} \\ \frac{5}{4}X^2 - \frac{1}{2}X + \frac{1}{4} - 1 = 0 \end{cases}$$



$$\begin{cases} Y = -\frac{1}{2}X + \frac{1}{2} \\ X^2 + \frac{1}{4}X^2 + \frac{1}{4} - \frac{1}{2}X = 1 \end{cases}$$

$$\begin{cases} y = -\frac{1}{2}x + \frac{1}{2} \\ \frac{5}{4}x^2 - \frac{1}{2}x + \frac{1}{4} - 1 = 0 \end{cases}$$

$$\begin{cases} y = -\frac{1}{2}x + \frac{1}{2} \\ \frac{5}{4}x^2 - \frac{2}{4}x - \frac{3}{4} = 0 \quad 5x^2 - 2x - 3 = 0 \end{cases}$$

$$\textcircled{2} \begin{cases} \cos 3x = -\frac{3}{5} \\ \sin 3x = \frac{4}{5} \end{cases}$$

$$3x = \arccos\left(-\frac{3}{5}\right) + 2k\pi$$

$$x = \frac{\arccos\left(-\frac{3}{5}\right) + 2k\pi}{3} = \frac{1 \pm \frac{4}{5}}{5} \begin{matrix} \rightarrow x_1 = 1 \\ \rightarrow x_2 = -\frac{3}{5} \end{matrix}$$

$$x_{1,2} = \frac{1 \pm \sqrt{1+15}}{5} =$$

$$\textcircled{1} \begin{cases} \cos 3x = 1 \\ \sin 3x = 0 \end{cases}$$

$$3x = 0 + 2k\pi$$

$$x = 0 + \frac{2}{3}k\pi$$

$k \in \mathbb{N}$

$$y = \left(-\frac{1}{2}\right)\left(-\frac{3}{5}\right) + \frac{1}{2}$$

$$y = \frac{3}{10} + \frac{1}{2} \rightarrow y = \frac{5}{10}$$