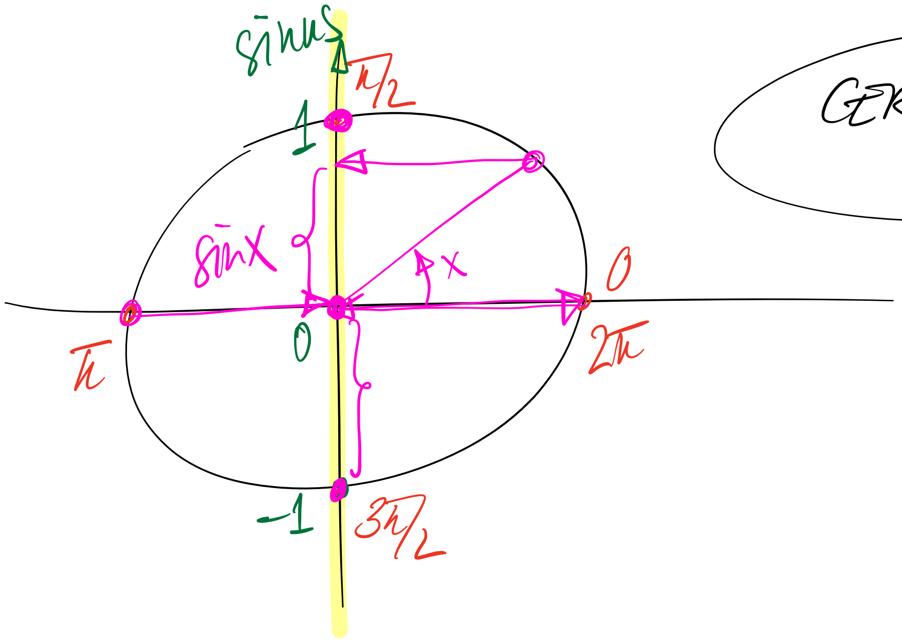


CERCLE TRIGO

$$\alpha_{rad} = \frac{\alpha_{deg}}{180°} \cdot \pi$$

$$\frac{90°}{180°} \cdot \pi = \frac{1}{2}\pi = \frac{\pi}{2}$$

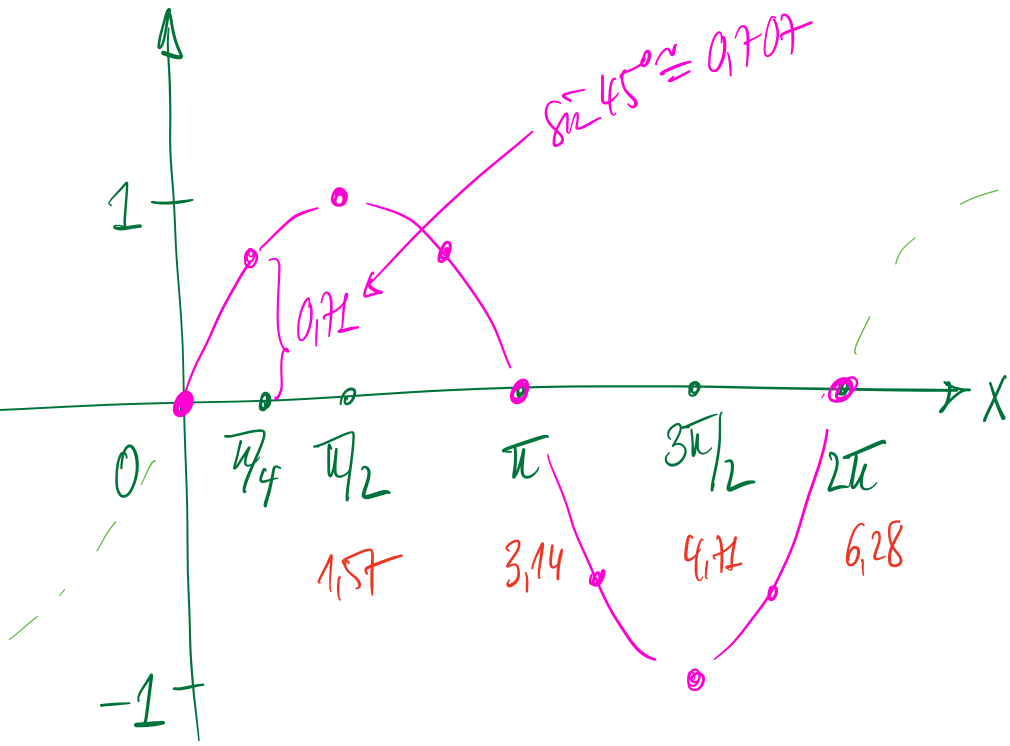
Dessiner la fonction sin x sur $\boxed{[0;2\pi]}$.

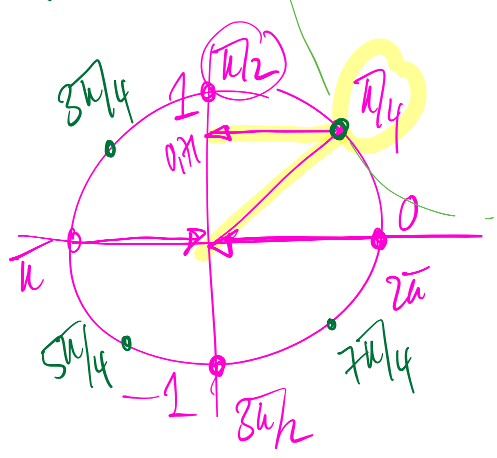
$\sin 0 = 0$ ✓

$\sin \frac{\pi}{2} = 1$

$\sin \pi = 0$

$\sin \frac{3\pi}{2} = -1$

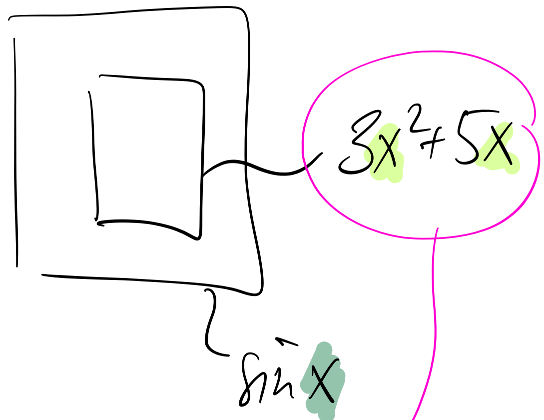


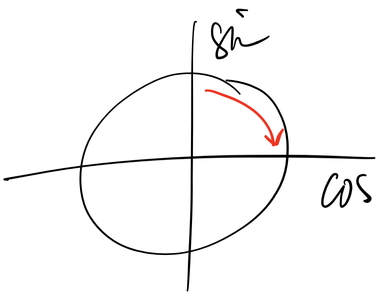


$$\tan x = \frac{\sin x}{\cos x}$$

$$(\tan x)' = \frac{(\sin x)'\cos x - \sin x\,(\cos x)'}{\cos^2 x}$$

$$\left(\sin\left(\boxed{3x^2+5x}\right)\right)' =$$





$$\cos(3x^2+5x)\cdot(3x^2+5x)' =$$

$$\cos(3x^2+5x)\cdot(6x+5)$$

$$\frac{x^2}{3} - \frac{3}{x^2} = \frac{x^4-9}{3x^2}$$

$$\left(\frac{x^4-9}{3x^2}\right)' = \frac{(x^4-9)' \cdot 3x^2 - (x^4-9)(3x^2)'}{(3x^2)^2}$$

$$= \frac{4x^3 \cdot 3x^2 - (x^4-9)\,6x}{9x^4}$$

$$= \frac{12x^5 - 6x^5 + 54x}{9x^4}$$

$$= \frac{6x^5+54x}{9x^4} = \frac{2x^5+18x}{3x^4}$$

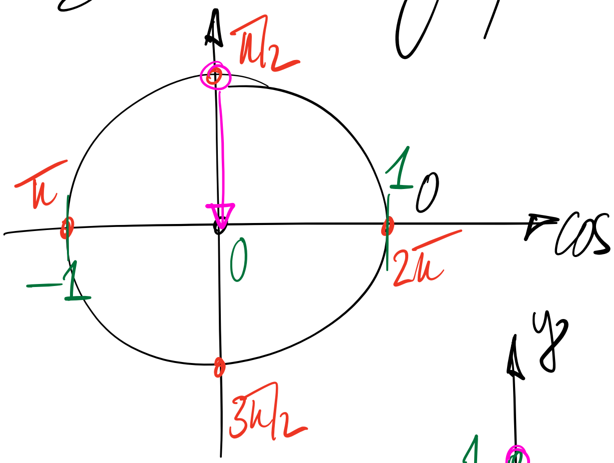
$$= \frac{x(2x^4+18)}{3x^4} = \boxed{\frac{2x^4+18}{3x^3}} = \frac{2x^4}{3x^3} + \frac{18}{3x^3}$$

$$= \frac{2x}{3} + \frac{6}{x^3} = \frac{2x}{3} + 6 \cdot \frac{1}{x^3}$$

$$\left(\frac{x^2}{3} - \frac{3}{x^2}\right)' = \left(\frac{x^2}{3}\right)' - \left(\frac{3}{x^2}\right)' = \frac{2x}{3} - 3 \cdot (-2) \cdot x^{-3}$$

$$= \frac{(x^2)'}{3} - 3\left(\frac{1}{x^2}\right)' = \frac{2x}{3} - 3 \cdot (x^{-2})'$$

Dessiner le graphe de $f(x) = \cos(x)$ sur $[0; 2\pi]$



$\cos 0 = 1$ $\cos \pi = -1$

$\cos \frac{\pi}{2} = 0$ $\cos \frac{3\pi}{2} = 0$

$\cos 2\pi = 1$