

$$OH = \cos \alpha$$

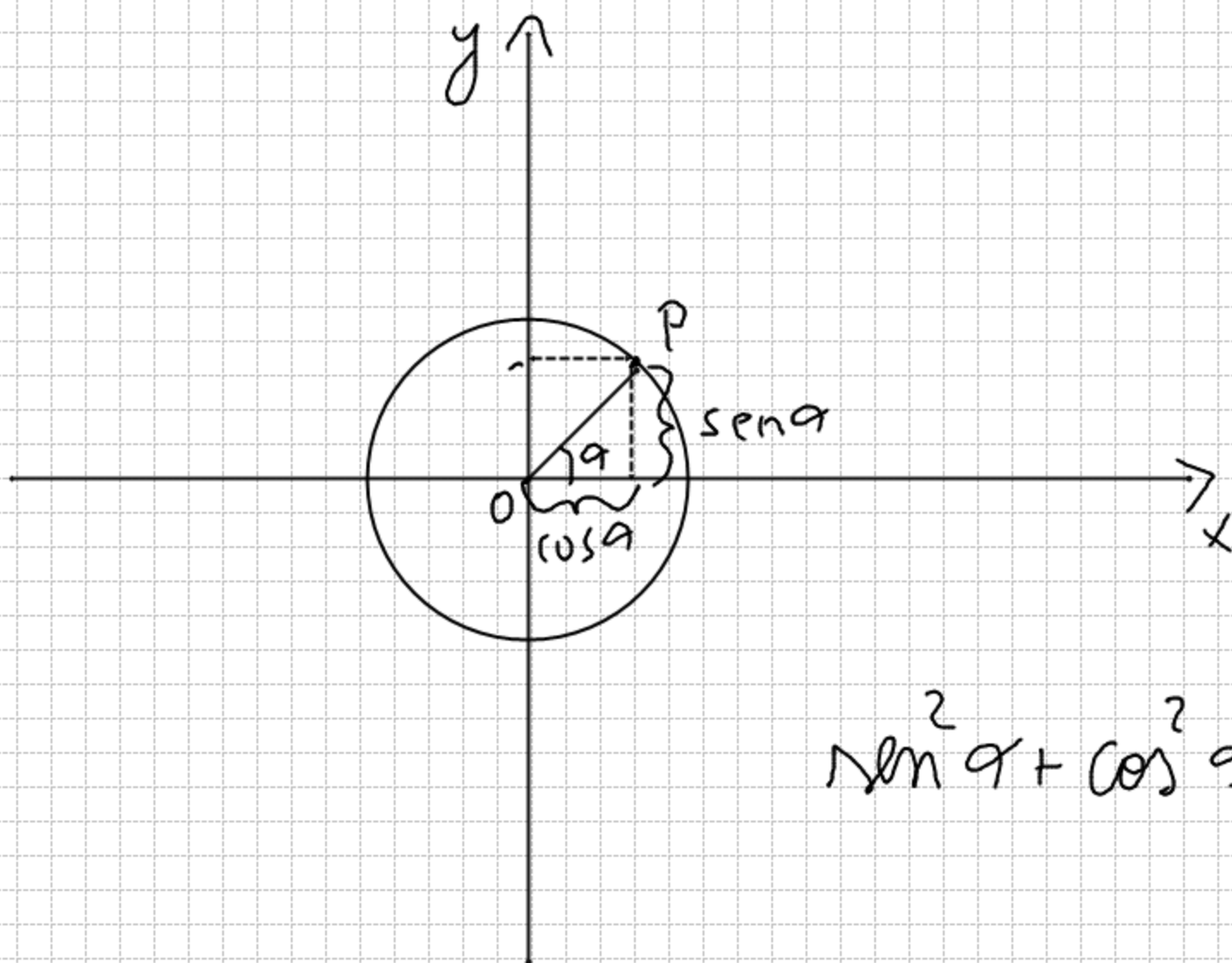
$$OK = \sin \alpha$$

$$AT = \tan \alpha$$

$$OH : OA = HP : AT$$

$$\cos \alpha : 1 = \sin \alpha : \tan \alpha$$

$$\tan \alpha = \frac{\sin \alpha \cdot 1}{\cos \alpha}$$



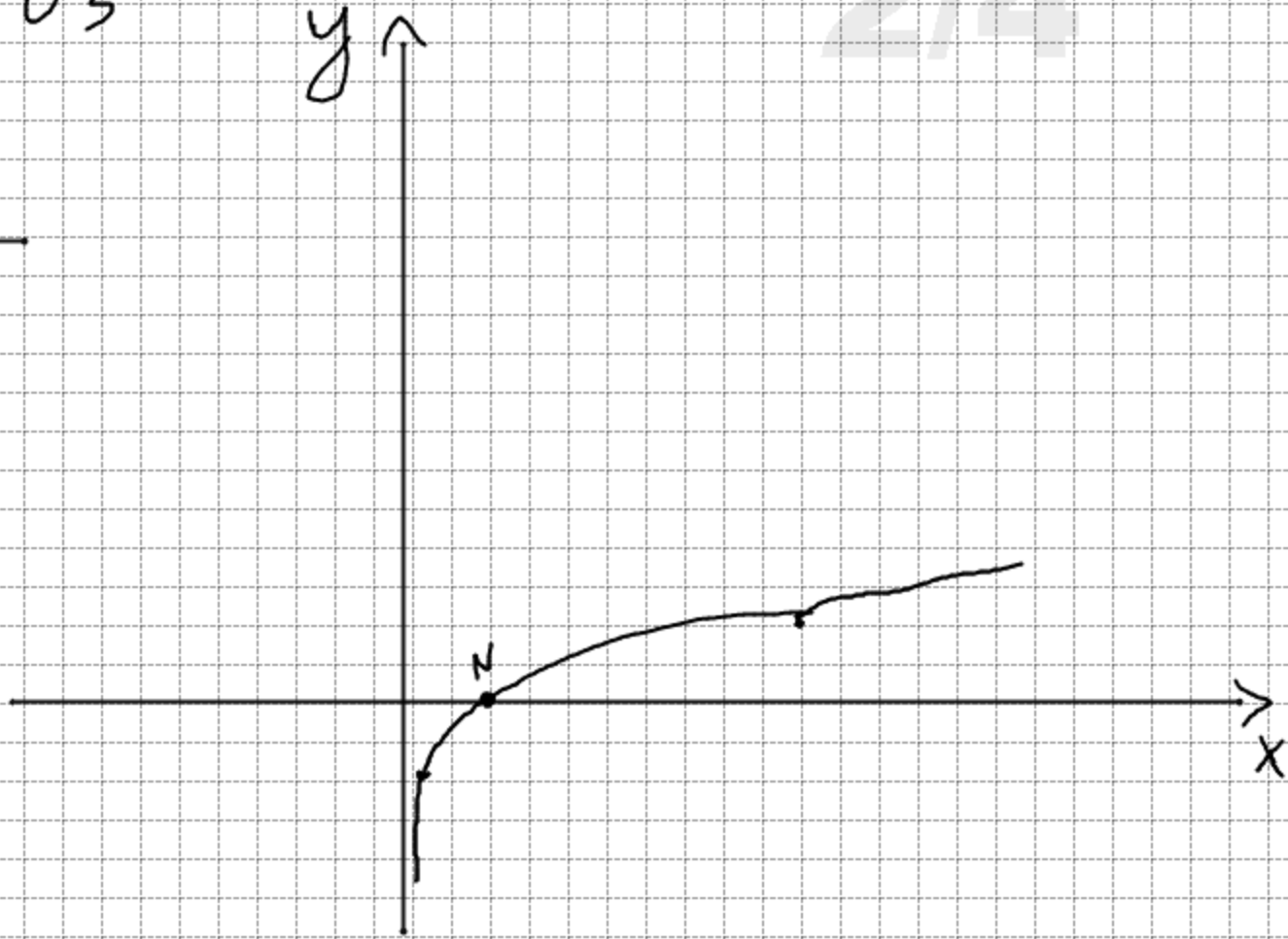
$$\sin^2 \alpha + \cos^2 \alpha = 1$$

$$y = \log_5 x$$

$$5^y = x$$

2/4

x	y
1	0
5	1
$\frac{1}{5}$	-1



$$\log_a b - \log_a c = \log_a \frac{b}{c}$$

$$x_1 = \log_a b \quad x_2 = \log_a c$$

$$a^{x_1} = b$$

$$a^{x_2} = c$$

$$\frac{a^{x_1}}{a^{x_2}} = \frac{b}{c}$$

$$a^{x_1 - x_2} = \frac{b}{c}$$

$$x_1 - x_2 = \log_a \frac{b}{c}$$

$$\log_a b - \log_a c = \log_a \frac{b}{c}$$

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$$f(x) = \frac{1}{4 - \sin x} \quad \left[0, \frac{\pi}{2}\right]$$

$$\text{Al } x=0 \quad \sin x = 0$$

$$\text{Al } x = \frac{\pi}{2} \quad \sin x = 1$$

En 0 e $\frac{\pi}{2}$ $f(x) = \sin x$ crece

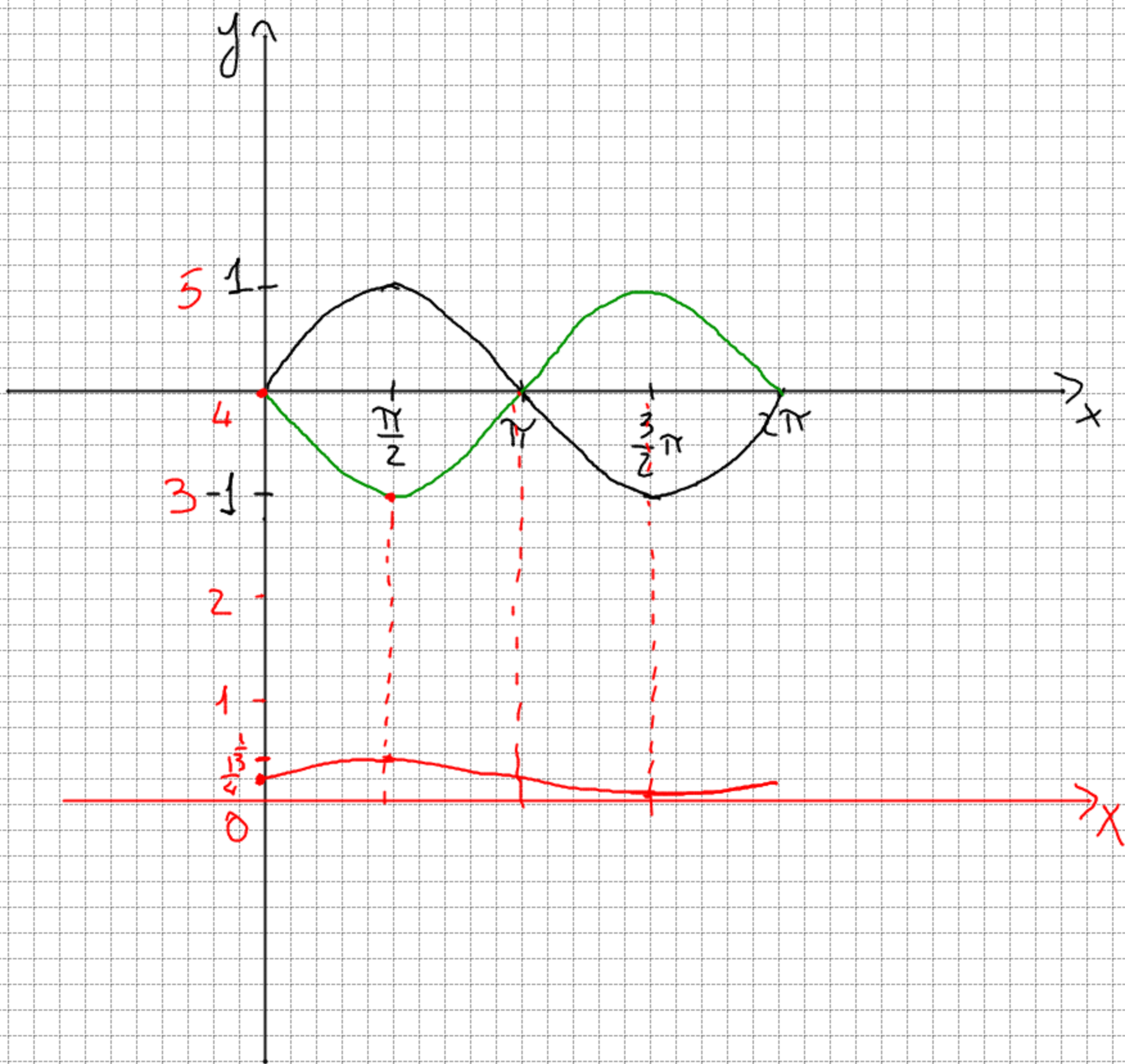
$$0 < \sin x < 1$$

$$-1 < -\sin x < 0$$

$$3 < 4 - \sin x < 4$$

$$\frac{1}{4} < \frac{1}{4 - \sin x} < \frac{1}{3}$$

$m \downarrow$ ↓ M

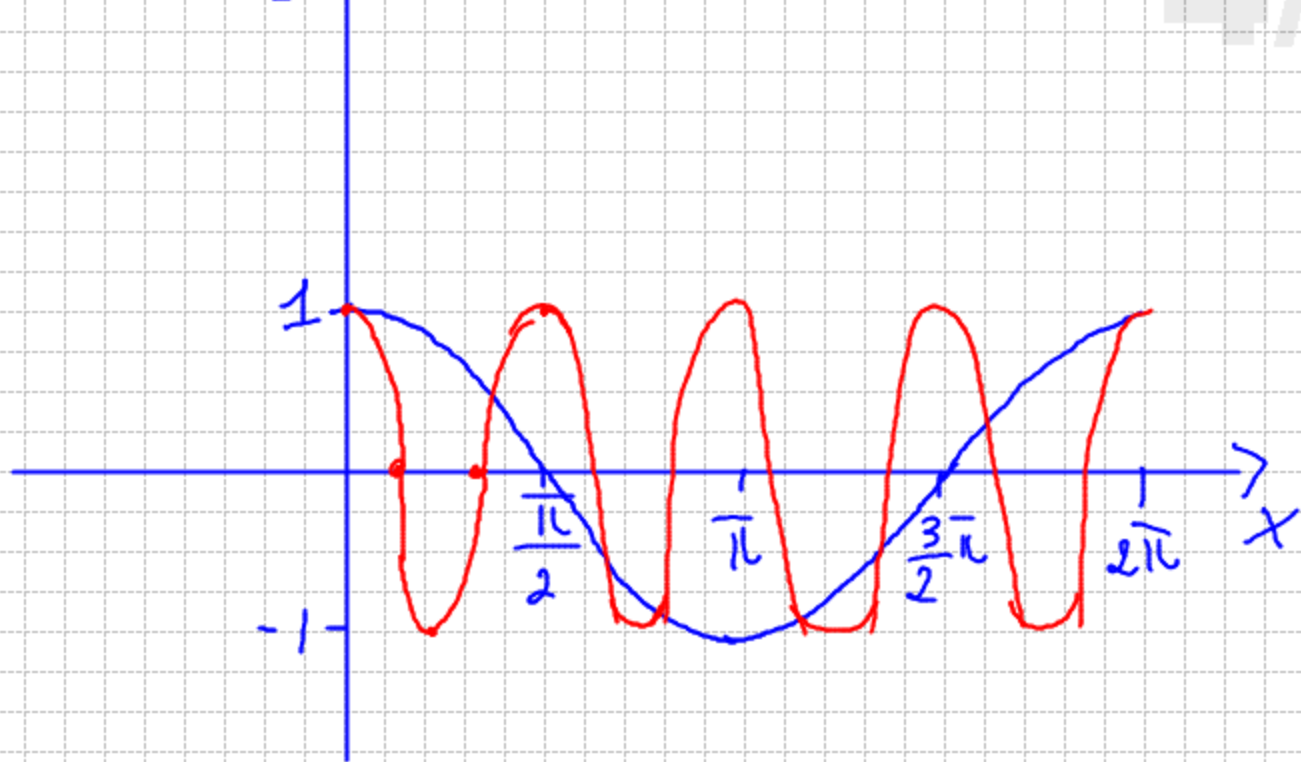


$$y_1 = \sin x \quad x = \frac{\pi}{2} \quad y_1 = 1$$

$$y_2 = -\sin x \quad x = \frac{\pi}{2} \quad y_2 = -1$$

$$y_3 = 4 - \sin x \quad x = \frac{\pi}{2} \quad y_3 = 3$$

$$y = \cos x$$



$$y_2 = \cos 4x$$

$$x=0 \quad y_2 = 1$$

$$x = \frac{\pi}{2} \quad y_2 = 1$$

$$x = \frac{\pi}{4} \quad y_2 = -1$$

$$y_2 = \cos 4 \frac{\pi}{4}$$

$$y = \cos \alpha x \quad T = \frac{2\pi}{\alpha}$$