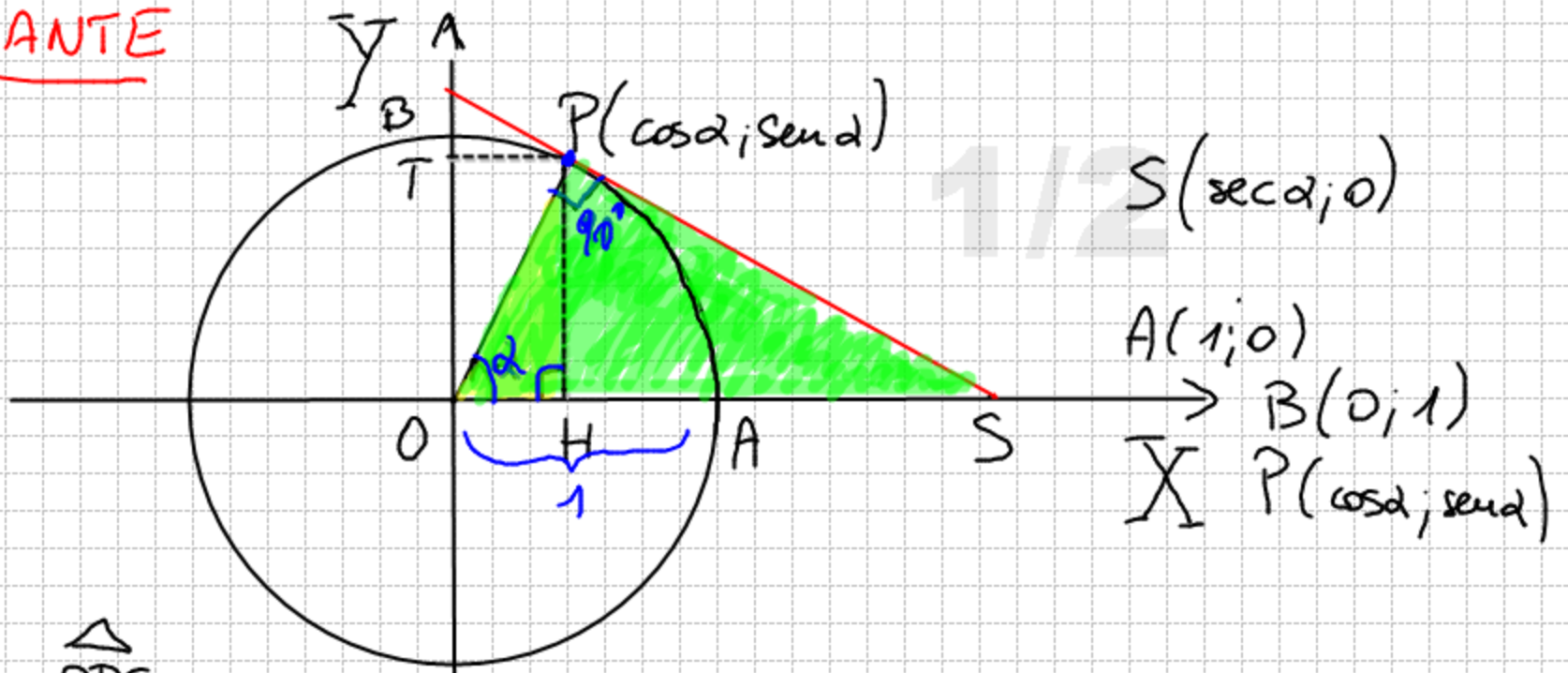


SECANTE



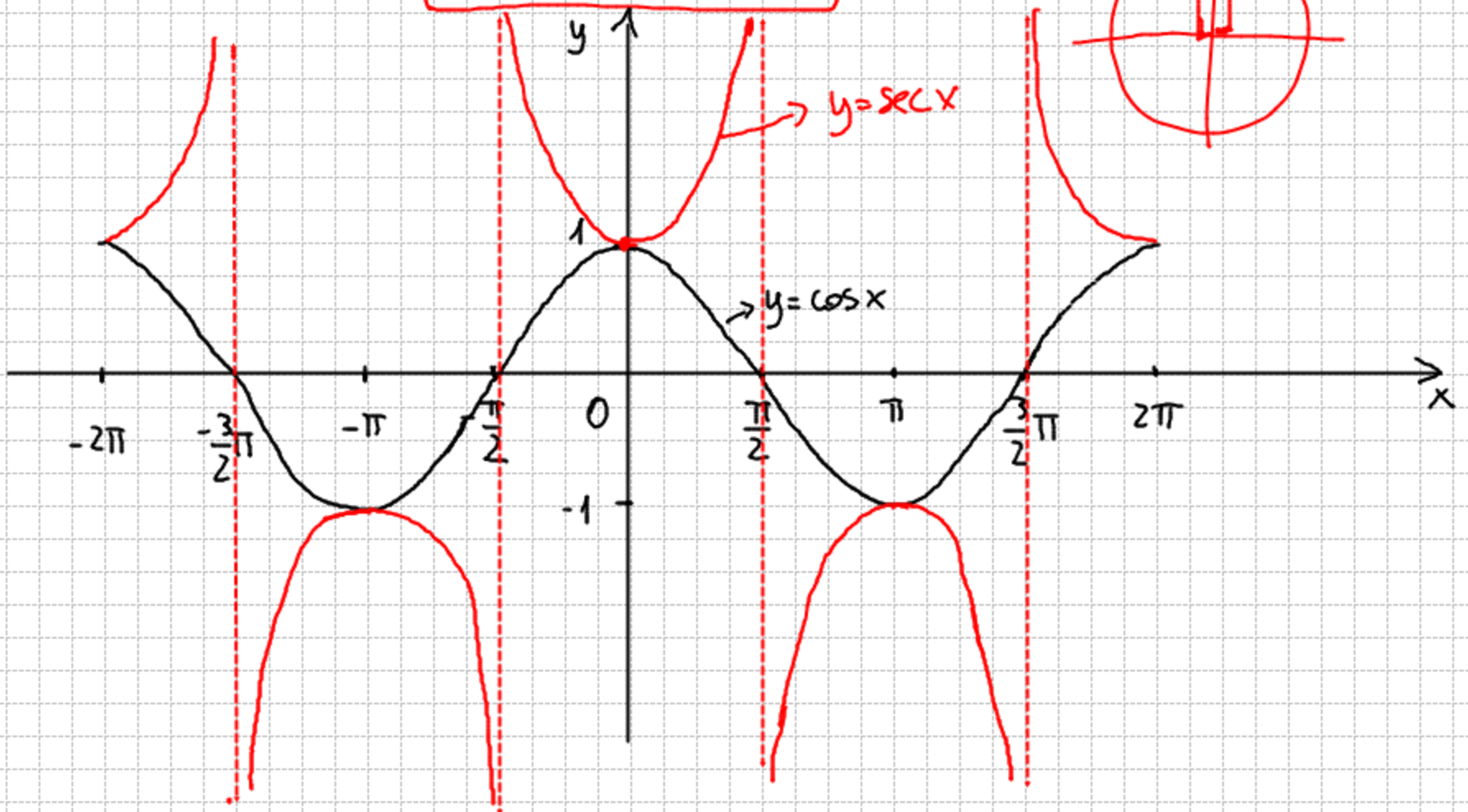
$\triangle OHP$ e $\triangle OPS$

sono simili perché sono retti ed hanno α uguale allora i lati sono in proporzione:

$$\overline{OS} : \overline{OP} = \overline{OP} : \overline{OH}$$

$$\sec \alpha : 1 = 1 : \cos \alpha$$

$$\boxed{\sec \alpha = \frac{1}{\cos \alpha}}$$



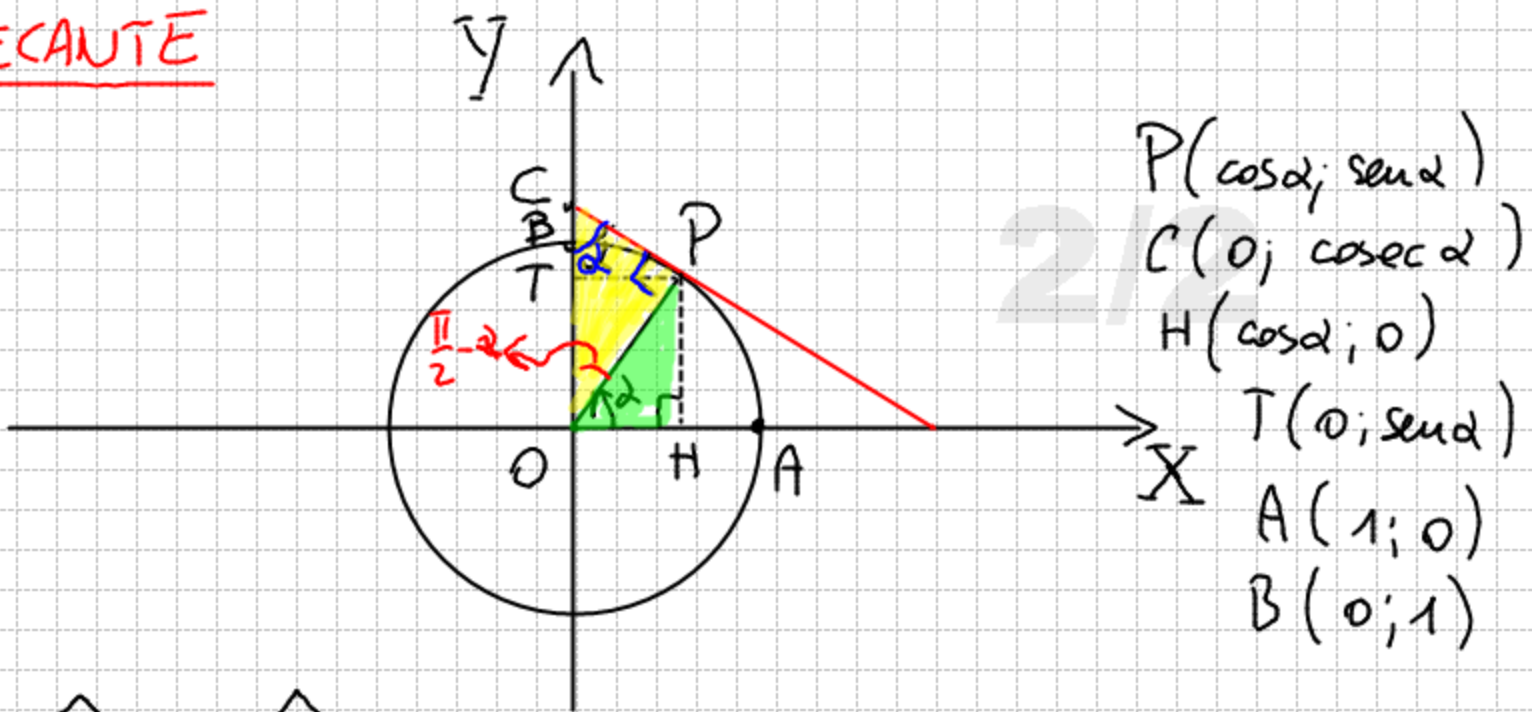
x	cos x	sec x = $\frac{1}{\cos x}$
0	1	1
$\frac{\pi}{2}$	0	∞
π	-1	-1
$\frac{3\pi}{2}$	0	∞

$y = \sec x$ $T = 2\pi$; $y = \sec x$ è pari \Rightarrow
 $\sec x = \sec(-x)$

$D_{\sec x} = \mathbb{R} - \left\{ k \frac{\pi}{2} \right\}; k \in \mathbb{Z}$

$CD_{\sec x} = \left\{ x \in \mathbb{R} / |x| \geq 1 \right\} = (-\infty; -1] \cup [1; +\infty)$

COSECANTE

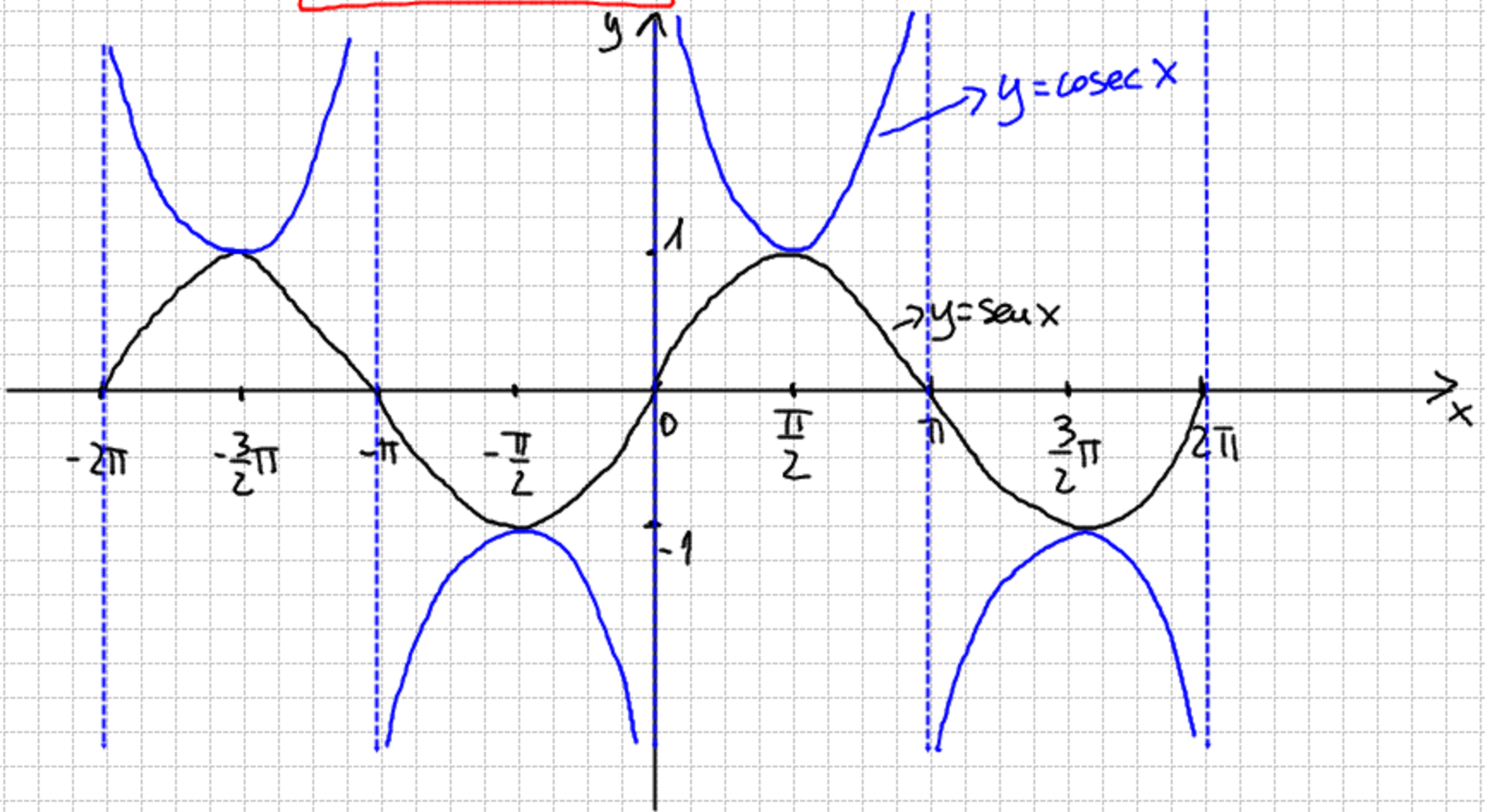


$\triangle OPC$ e $\triangle OHP$: sono simili perché entrambi retti e hanno α uguale
allora i lati sono in proporzione:

$$\frac{\overline{OC}}{\overline{OP}} = \frac{\overline{OP}}{\overline{HP}}$$

$\underbrace{\quad}_{OPC} \quad \quad \quad \underbrace{\quad}_{OPH}$
 $\text{cosec } \alpha : 1 = 1 : \text{sen } \alpha$

$$\text{cosec } \alpha = \frac{1}{\text{sen } \alpha}$$



x	sen x	cosec x
0	0	∞
$\frac{\pi}{2}$	1	1
π	0	∞
$\frac{3\pi}{2}$	-1	-1
2π	0	∞

$$y = \text{cosec } x \quad T = 2\pi$$

$\text{cosec } x = -\text{cosec}(-x) \Rightarrow y = \text{cosec } x$
 è dispari (simmetrica rispetto all'origine
 degli assi).

$$D_{\text{cosec } x} = \mathbb{R} - \{k\pi\}, k \in \mathbb{Z}$$

$$CD_{\text{cosec } x} = \{x \in \mathbb{R} \mid |x| \geq 1\} =$$

$$= (-\infty; -1] \cup [1; +\infty)$$