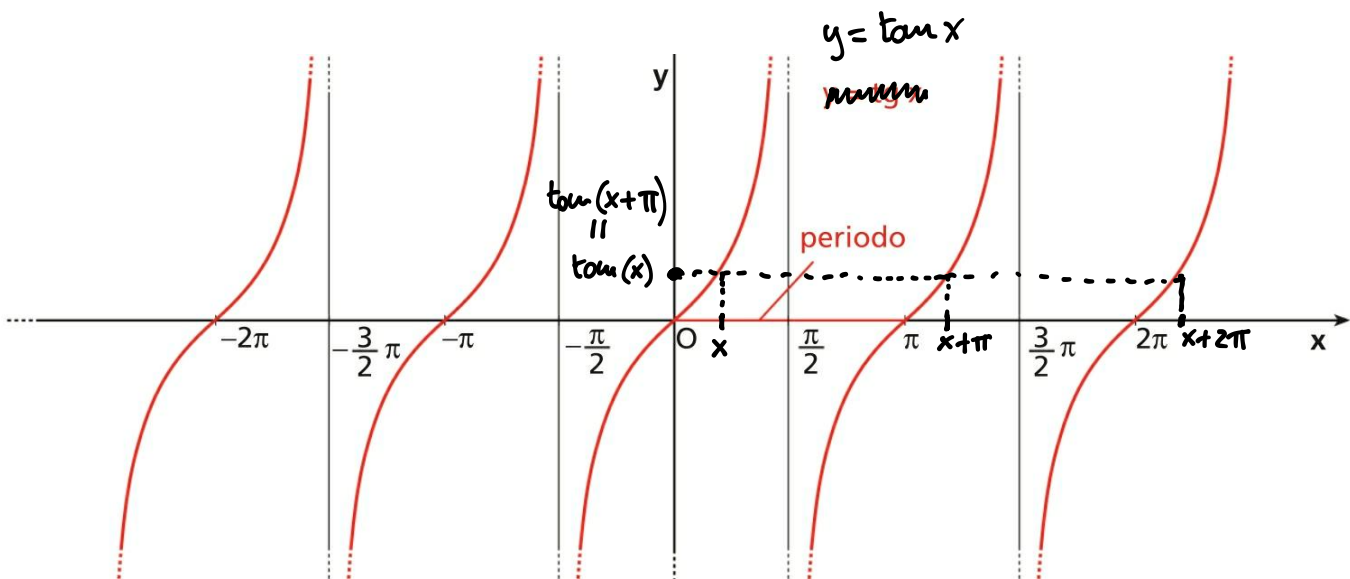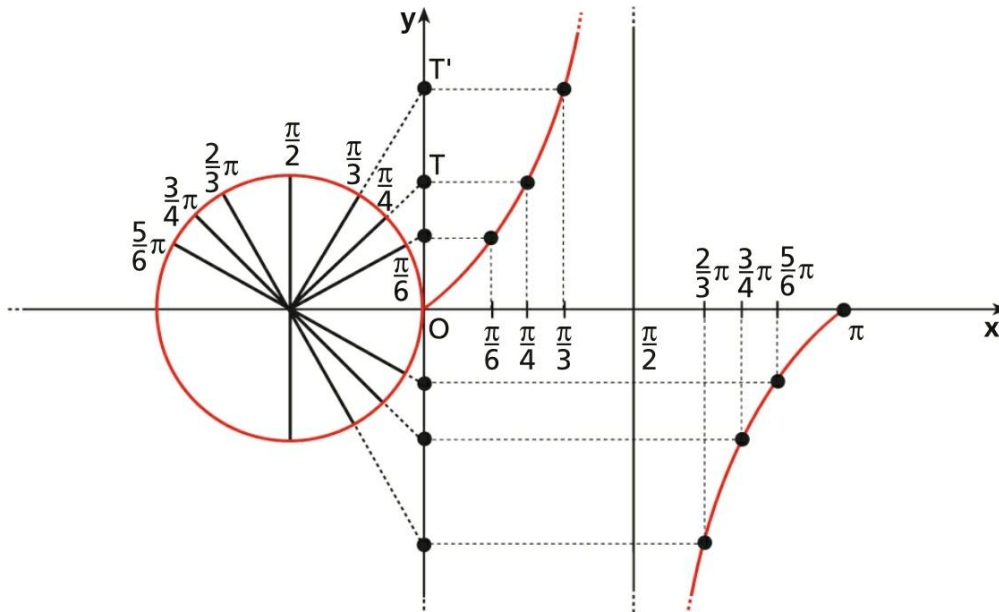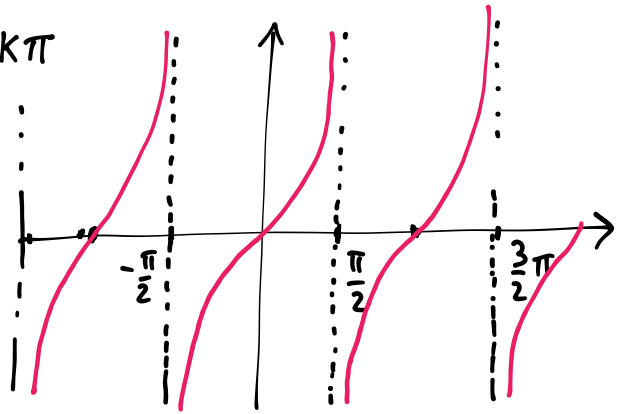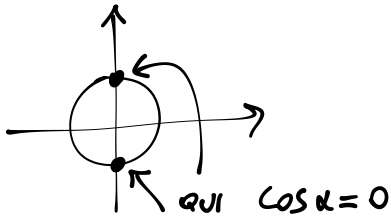20/4/2018

TANGENTE GONIOMETRICA

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

$$\alpha \neq \frac{\pi}{2} + K\pi$$

qui $\cos \alpha = 0$

$y = \tan x$

$\tan(x+\pi)$
$\shortparallel$
$\tan(x)$

periodo

$$\tan(\alpha + K\pi) = \tan \alpha$$

VALORI DELLA TANGENTE

$\alpha°$	α (Rad)	$\sin\alpha$	$\cos\alpha$	$\tan\alpha = \dfrac{\sin\alpha}{\cos\alpha}$
$0°$	0	0	1	0
$45°$	$\dfrac{\pi}{4}$	$\dfrac{\sqrt{2}}{2}$	$\dfrac{\sqrt{2}}{2}$	1
$30°$	$\dfrac{\pi}{6}$	$\dfrac{1}{2}$	$\dfrac{\sqrt{3}}{2}$	$\dfrac{\sqrt{3}}{3}$
$60°$	$\dfrac{\pi}{3}$	$\dfrac{\sqrt{3}}{2}$	$\dfrac{1}{2}$	$\sqrt{3}$
$90°$	$\dfrac{\pi}{2}$	1	0	NON ESISTE
$180°$	π	0	-1	0
$270°$	$\dfrac{3}{2}\pi$	-1	0	NON ESISTE
$360°$	2π	0	1	0

54 $\quad 3 \tan 0° + 4 \cos 30° \sin 60° - \sqrt{2} \cos 45° - 6 \sin 90° =$

$$= 3 \cdot 0 + 4 \cdot \frac{\sqrt{3}}{2} \cdot \frac{\sqrt{3}}{2} - \sqrt{2} \cdot \frac{\sqrt{2}}{2} - 6 \cdot 1 =$$

$$= 3 - 1 - 6 = -4$$

PER GLI ALTRI ESERCIZI

COTANGENTE DI α

$$\boxed{\cot \alpha = \frac{\cos \alpha}{\sin \alpha}} \quad \alpha \neq K\pi$$

$$\boxed{\cot \alpha = \frac{1}{\tan \alpha}} \quad \alpha \neq K\frac{\pi}{2}$$

SECANTE DI α

$$\boxed{\sec \alpha = \frac{1}{\cos \alpha}} \quad \alpha \neq \frac{\pi}{2} + K\pi$$

COSECANTE DI α

$$\boxed{\cosec \alpha = \frac{1}{\sin \alpha}} \quad \alpha \neq K\pi$$

52 $\quad 4 \sin 30° - \sec 60° + \sqrt{2} \cosec 45° + \cos 90° - 3 \sec 0° + \cot 45° =$

$$= 4 \cdot \frac{1}{2} - \frac{1}{\cos 60°} + \sqrt{2} \cdot \frac{1}{\sin 45°} + 0 - 3 \cdot \frac{1}{\cos 0°} + \frac{\cos 45°}{\sin 45°} =$$