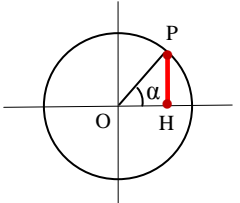
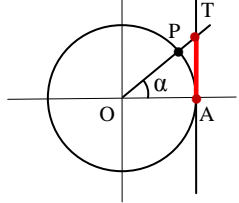
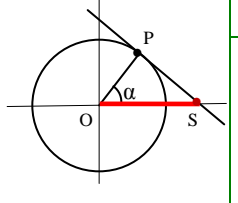
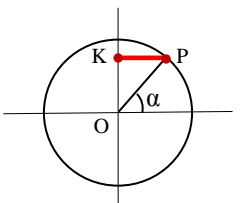
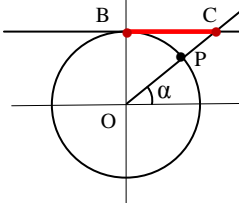
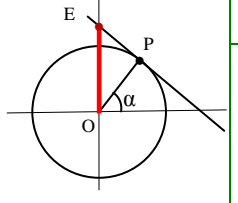


goniometria Funzioni goniometriche, relazioni fondamentali e grafici

definizione delle funzioni goniometriche sulla circonferenza goniometrica di centro l'origine degli assi e raggio 1

	seno α $\text{sen } \alpha = \frac{PH}{OP} = \overline{PH}$		tangente α $\text{tg } \alpha = \frac{TA}{OA} = \overline{TA}$		secante α $\text{sec } \alpha = \frac{OS}{OP} = \overline{OS}$
	coseno α $\text{cos } \alpha = \frac{PK}{OP} = \overline{PK}$		cotangente α $\text{ctg } \alpha = \frac{BC}{OP} = \overline{BC}$		cosecante α $\text{cosec } \alpha = \frac{OE}{OP} = \overline{OE}$

le cinque relazioni fondamentali

$\text{sen}^2 \alpha + \text{cos}^2 \alpha = 1$	$\text{tg } \alpha = \frac{\text{sen } \alpha}{\text{cos } \alpha}$	$\text{ctg } \alpha = \frac{\text{cos } \alpha}{\text{sen } \alpha}$	$\text{sec } \alpha = \frac{1}{\text{cos } \alpha}$	$\text{cosec } \alpha = \frac{1}{\text{sen } \alpha}$
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relazioni che esprimono una funzione goniometrica rispetto alle altre

$\text{sen } \alpha$ in funzione di ...	$\text{cos } \alpha$ in funzione di ...	$\text{tg } \alpha$ in funzione di ...	$\text{ctg } \alpha$ in funzione di ...
$\text{sen } \alpha = \pm \sqrt{1 - \text{cos}^2 \alpha}$	$\text{cos } \alpha = \pm \sqrt{1 - \text{sen}^2 \alpha}$	$\text{tg } \alpha = \pm \frac{\text{sen } \alpha}{\sqrt{1 - \text{sen}^2 \alpha}}$	$\text{ctg } \alpha = \pm \frac{\sqrt{1 - \text{sen}^2 \alpha}}{\text{sen } \alpha}$
$\text{sen } \alpha = \pm \frac{\text{tg } \alpha}{\sqrt{1 + \text{tg}^2 \alpha}}$	$\text{cos } \alpha = \pm \frac{1}{\sqrt{1 + \text{tg}^2 \alpha}}$	$\text{tg } \alpha = \pm \frac{\sqrt{1 - \text{cos}^2 \alpha}}{\text{cos } \alpha}$	$\text{ctg } \alpha = \pm \frac{\text{cos } \alpha}{\sqrt{1 - \text{cos}^2 \alpha}}$
$\text{sen } \alpha = \pm \frac{1}{\sqrt{1 + \text{ctg}^2 \alpha}}$	$\text{cos } \alpha = \pm \frac{\text{ctg } \alpha}{\sqrt{1 + \text{ctg}^2 \alpha}}$	$\text{tg } \alpha = \frac{1}{\text{ctg } \alpha}$	$\text{ctg } \alpha = \frac{1}{\text{tg } \alpha}$

il segno + o - va preso a seconda del segno della funzione nel quadrante in cui si trova l'angolo

grafici delle funzioni goniometriche

