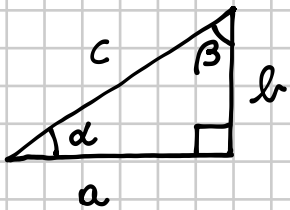


TRIGONOMETRIA

TRIANGOLI RETTANGOLI



$$a = c \cdot \cos \alpha$$

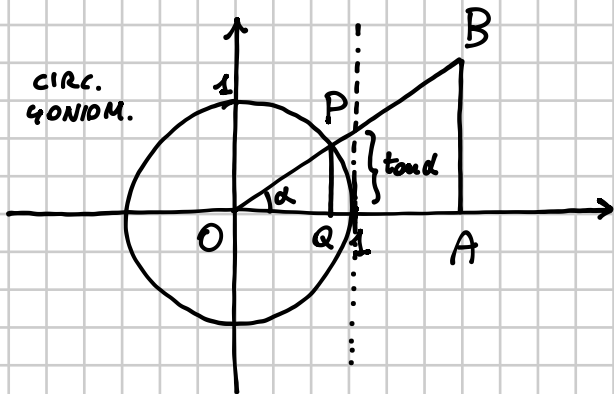
$$b = c \cdot \sin \alpha$$

$$b = a \cdot \tan \alpha$$

$$a = c \cdot \sin \beta$$

$$b = c \cdot \cos \beta$$

$$b = a \cdot \cot \beta$$



i triangoli OQP e OAB sono simili

$$\overline{OQ} = \cos \alpha \quad \overline{PQ} = \sin \alpha \quad \overline{OP} = 1$$

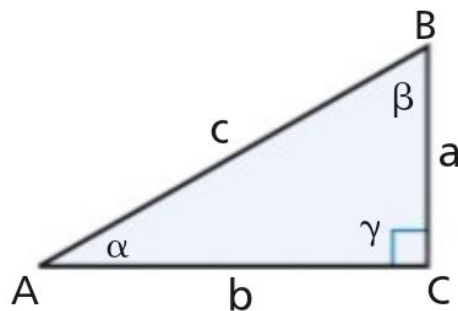
ESEMPI

FIGURA DI RIFERIMENTO



LA ADOTTEREMO ANCHE NOI

DA ADESSO IN POI



23 $b = 12;$

$$\beta = \frac{\pi}{3}$$

Risolvere il triangolo rettangolo.

$$a = ? \quad c = ? \quad \alpha = ?$$

da trovare

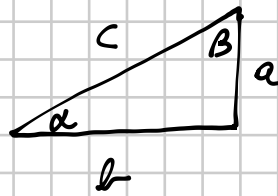
$$b = a \tan \beta \Rightarrow a = \frac{b}{\tan \beta} = \frac{12}{\tan \frac{\pi}{3}} =$$

$$c = \sqrt{a^2 + b^2} = \sqrt{48 + 144} = \sqrt{192} = 8\sqrt{3} \quad = \frac{12}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = 4\sqrt{3}$$

$$\alpha = \frac{\pi}{2} - \frac{\pi}{3} = \frac{\pi}{6}$$

21 $c = 5;$

$\beta = 10^\circ.$



$a = c \cos \beta = 5 \cdot \cos 10^\circ = 4,924\dots$

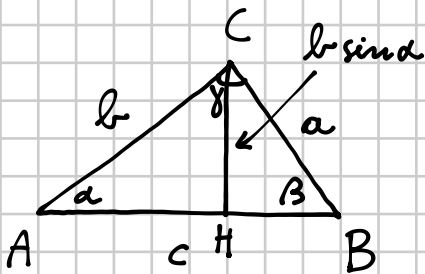
$\approx 4,92$

$\alpha = 90^\circ - \beta = 90^\circ - 10^\circ = 80^\circ$

$b = c \sin \beta = 5 \cdot \sin 10^\circ = 0,86824\dots$

$\approx 0,87$

AREA DEL TRIANGOLO



$A = \frac{1}{2} b c \sin \alpha \quad \left(= \frac{1}{2} a c \sin \beta = \frac{1}{2} a b \sin \gamma \right)$