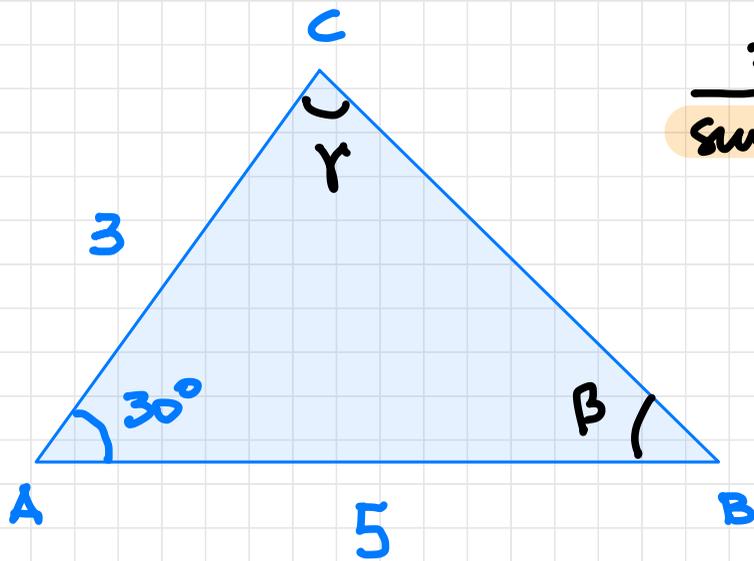


# TEOREMA DEL COSENO



M4022

## PROVIAMO A RISOLVERE IL TRIANGOLO



$$\frac{3}{\sin \beta} = \frac{5}{\sin \gamma} = \frac{\overline{CB}}{\sin 30^\circ}$$

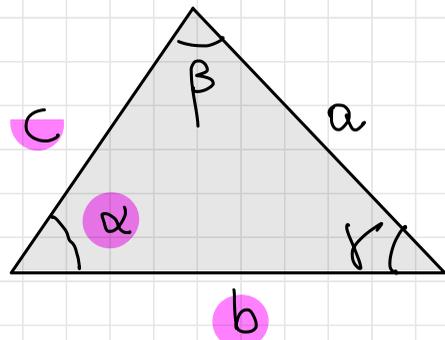
ANGOLO COMPRESO FRA I  
LATI 

## TEOREMA DEL COSENO (CARNOT)

$$a^2 = b^2 + c^2 - 2bc \cos \alpha$$

$$b^2 = a^2 + c^2 - 2ac \cos \beta$$

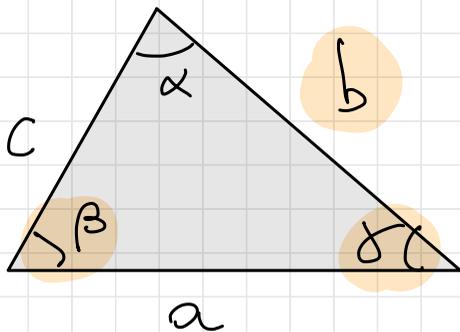
$$c^2 = a^2 + b^2 - 2ab \cos \gamma$$



NELL'ESEMPIO:

$$a^2 = 9 + 25 - 30 \cos 30^\circ \Rightarrow a = 2,8$$

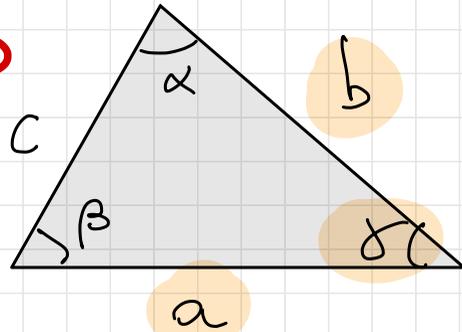
1 LATO E 2 ANGOLI



$$\frac{a}{\sin \alpha} = \frac{b}{\sin \beta} = \frac{c}{\sin \gamma}$$

2 LATI E ANGOLO FRA ESSI COMPRESO

CARNOT:  $c^2 = a^2 + b^2 - 2ab \cos \gamma$



### 3 LATI

CARNOT

$$a^2 = b^2 + c^2 - 2bc \cos \alpha$$

RICAVO  $\cos \alpha = \frac{a^2 - b^2 - c^2}{-2bc}$

ESERCIZIO

$$b = 4 \quad c = 2\sqrt{2} \quad \operatorname{tg} \gamma = \frac{\sqrt{3}}{3}$$

