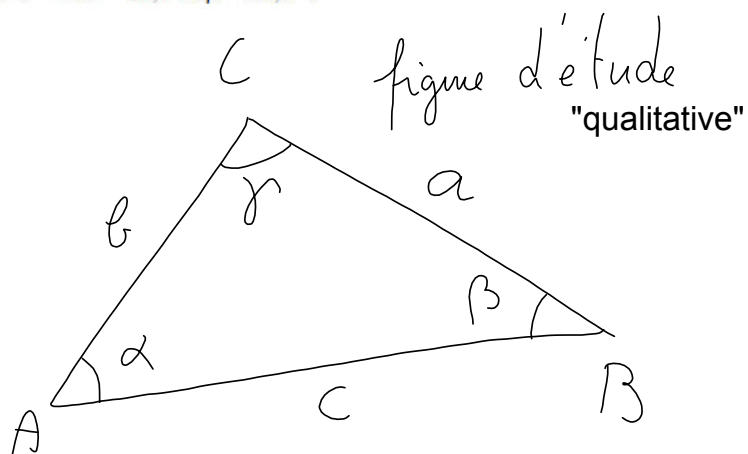
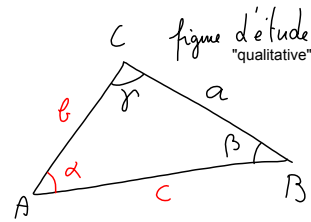


- 1) Soit un triangle quelconque ABC.
- a) On donne $a = BC = 8$, $\beta = 48,25^\circ$ et $\gamma = 72,6^\circ$.
Calculer α , $b = AC$ et $c = AB$.
 - b) On donne $a = BC = 35$, $b = AC = 12$ et $c = AB = 25$.
Calculer α , β et γ .
 - c) On donne $b = AC = 23,2$ et $c = AB = 36,7$ et $\beta = 36,4^\circ$.
Calculer α , γ et $a = BC$.



Serie (3)

- 1) Soit un triangle quelconque ABC.
 a) On donne $a = BC = 8$, $\beta = 48,25^\circ$ et $\gamma = 72,6^\circ$.
 Calculer α , $b = AC$ et $c = AB$.

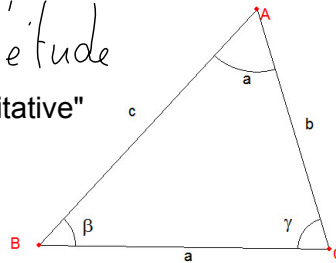


1 a) Données:

$$\begin{cases} a = 8 \\ \gamma = 72,6^\circ \\ \beta = 48,25^\circ \end{cases}$$

Calculer α , b , c

figure d'étude
"quantitative"



Résolution: 1) calcul de α :

$$\text{On a: } \alpha + \beta + \gamma = 180^\circ \Leftrightarrow \alpha = 180^\circ - \beta - \gamma$$

$$\text{a.m.: } \alpha = 180^\circ - 48,25 - 72,6 = 59,15^\circ$$

2) thm du sinus: $\frac{a}{\sin(\alpha)} = \frac{b}{\sin(\beta)} = \frac{c}{\sin(\gamma)}$

On a: α , β et γ et a

$$\text{alors: } \frac{a}{\sin(\alpha)} = \frac{b}{\sin(\beta)} \Leftrightarrow b = a \cdot \frac{\sin(\beta)}{\sin(\alpha)}$$

$$\frac{a}{\sin(\alpha)} = \frac{c}{\sin(\gamma)} \Leftrightarrow c = a \cdot \frac{\sin(\gamma)}{\sin(\alpha)}$$

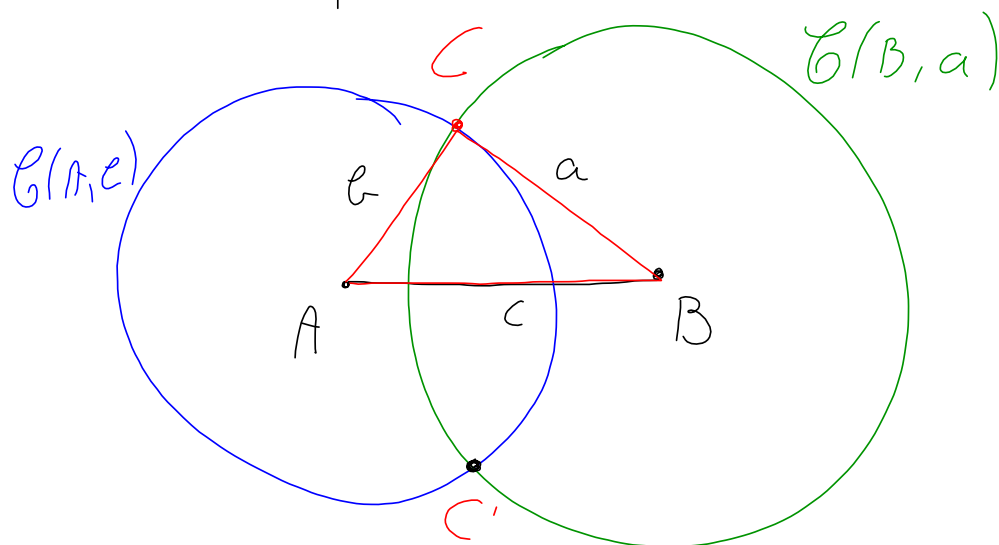
$$\text{a.m.: } b = 8 \cdot \frac{\sin(48,25)}{\sin(59,15)} \approx 6,95$$

$$c = 8 \cdot \frac{\sin(72,6)}{\sin(59,15)} \approx 8,89$$

- b) On donne $a = BC = 35$, $b = AC = 12$ et $c = AB = 25$.
Calculer α , β et γ .

Données: * $a = 35$ calculer α, β, γ
 $b = 12$
 $c = 25$

Résolution: peut-on construire ce triangle?



- c) On donne $b = AC = 23,2$ et $c = AB = 36,7$ et $\beta = 36,4^\circ$.
Calculer α , γ et $a = BC$.

