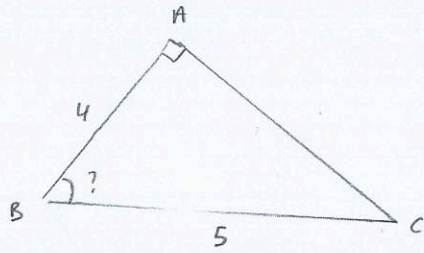


Correction inveno

exo1

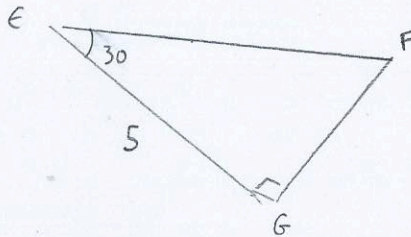


$$\cos(\widehat{ABC}) = \frac{AB}{BC}$$

$$\cos(\widehat{ABC}) = \frac{4}{5}$$

$$\widehat{ABC} = \text{Arccos}\left(\frac{4}{5}\right) \approx 37^\circ$$

exo2



$$1. \cos(\widehat{GEF}) = \frac{EG}{EF}$$

$$\cos 30 = \frac{5}{EF}$$

$$EF = \frac{5}{\cos 30} \approx 5,8 \text{ cm.}$$

$$2. \widehat{EFG} = 90 - \widehat{GEF} \\ = 90 - 30 \\ = 60^\circ$$

$$\text{dmc } \cos(\widehat{EFG}) = \frac{FG}{EF}$$

$$\cos 60 = \frac{FG}{5,8}$$

$$FG = 5,8 \times \cos 60 \\ \approx 2,9 \text{ cm.}$$

exo3

$$AC = 4,5 \text{ m} = 450 \text{ cm.}$$

$$\cos(\widehat{BCA}) = \frac{BC}{AC}$$

$$\cos(\widehat{BCA}) = \frac{80}{450}$$

$$\text{dmc } \widehat{BCA} = \text{Arccos}\left(\frac{80}{450}\right) \approx 79,8^\circ$$

exo4.

Dans le triangle ABH:

$$\cos(\widehat{ABH}) = \frac{BH}{AB}$$

$$\cos(\widehat{ABH}) = \frac{5}{8}$$

$$\widehat{ABH} = \text{Arccos}\left(\frac{5}{8}\right) \approx 51,3^\circ$$

Dans le triangle ACH:

$$\cos(\widehat{ACH}) = \frac{CH}{AC}$$

$$\cos(\widehat{ACH}) = \frac{3,5}{7}$$

$$\widehat{ACH} = \text{Arccos}\left(\frac{3,5}{7}\right)$$

$$\widehat{ACH} \approx 60^\circ$$

Dmc:

$$\widehat{BAC} = 180 - 51,3 - 60$$

$$\widehat{BAC} = 68,7^\circ$$

$$\text{ccl: } \widehat{A} = 68,7^\circ \quad \widehat{B} = 51,3^\circ \quad \text{et } \widehat{C} = 60^\circ$$

2. Dans le triangle ACH:

$$\widehat{CAH} = 90 - \widehat{ACH}$$

$$= 90 - 60$$

$$= 30^\circ$$

$$\text{De plus } \cos(\widehat{CAH}) = \frac{AH}{AC}$$

$$\text{car } \cos 30 = \frac{AH}{7} \quad \text{d'où } AH = 7 \cos 30 \\ \approx 6,1 \text{ cm.}$$

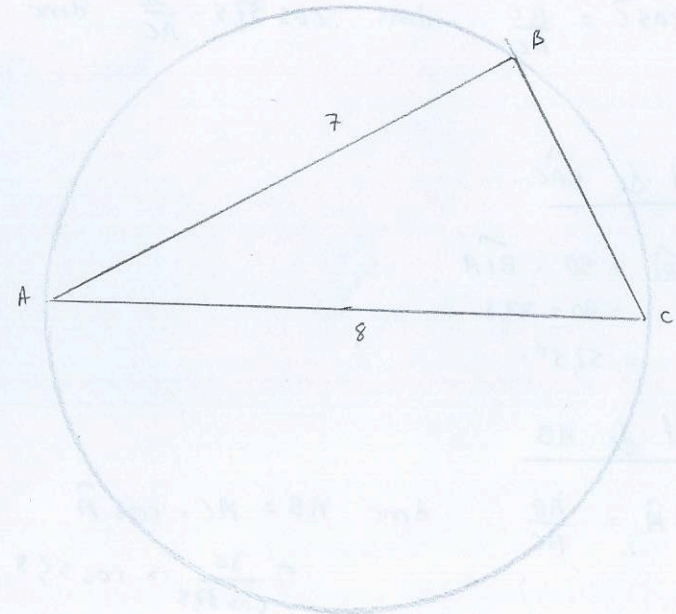
$$3. \text{aire}(ABC) = \frac{AH \times BC}{2}$$

$$= \frac{6,1 \times 8,5}{2}$$

$$= 25,925 \text{ cm}^2$$

exo5

1.



2. B est un point du cercle de diamètre [AC] donc le triangle ABC est rectangle en B.

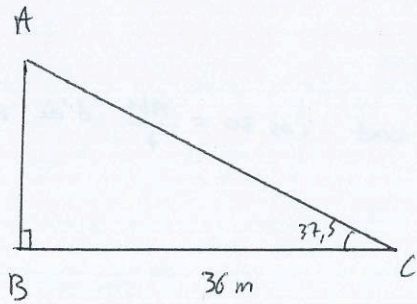
$$3. \cos \widehat{BAC} = \frac{AB}{AC} = \frac{7}{8}$$

$$\text{dmc } \widehat{ACB} = 90 - 29 \\ = 61^\circ$$

$$\widehat{BAC} = \text{Arccos}\left(\frac{7}{8}\right)$$

$$\widehat{BAC} \approx 29^\circ$$

ex06.



* calcul de AC.

$$\cos \hat{C} = \frac{BC}{AC} \quad \text{donc} \quad \cos 37,5 = \frac{36}{AC} \quad \text{donc} \quad AC = \frac{36}{\cos 37,5}$$

$AC \approx \dots$

* calcul de \hat{BAC} .

$$\begin{aligned} \hat{BAC} &= 90 - \hat{BCA} \\ &= 90 - 37,5 \\ &= 52,50. \end{aligned}$$

* calcul de AB.

$$\begin{aligned} \cos \hat{A} &= \frac{AB}{AC} \quad \text{donc} \quad AB = AC \times \cos \hat{A} \\ &= \frac{36}{\cos 37,5} \times \cos 52,5 \\ &\approx 28 \text{ m.} \end{aligned}$$