Exercice 9

- $2x + 8 = 7$

$2x + 8 - 8 = 7 - 8$

$\frac{2x}{2} = -\frac{1}{2}$

$x = -\frac{1}{2}$

donc $S = \{-\frac{1}{2}\}$

- $4 - 8x = 15$

$4 - 4 - 8x = 15 - 4$

$\frac{-8x}{-8} = \frac{11}{-8}$

$$x = -\frac{11}{8}$$

donc $S = \left\{-\frac{11}{8}\right\}$.

- $5x + 11 = 3x + 5$.

$5x + 11 - 11 = 3x + 5 - 11$

$5x = 3x - 6$

$5x - 3x = 3x - 3x - 6$

$\frac{2x}{2} = \frac{-6}{2}$

$x = -3$ donc $S = \{-3\}$.

$$4x - 3 = 2x + 8.$$

$$4x - 3 + 3 = 2x + 8 + 3$$

$$4x = 2x + 11$$

$$4x - 2x = 2x - 2x + 11$$

$$\frac{2x}{2} = \frac{11}{2}$$

$$x = \frac{11}{2}$$

donc $S = \left\{\frac{11}{2}\right\}$.

Revisions

- $4x - 1 = 3$.

$4x - 1 + 1 = 3 + 1$

$\frac{4x}{4} = \frac{4}{4}$

$x = 1$

- $6 - 2x = 5$

$6 - 6 - 2x = 5 - 6$

$\frac{-2x}{-2} = \frac{-1}{-2} \Rightarrow x = \frac{1}{2}$

• $5x - 3 = 7x + 2$

$5x - 3 + 3 = 7x + 2 + 3$

$5x = 7x + 5$

$5x - 7x = 7x - 7x + 5$

$\frac{-2x}{-2} = \frac{5}{-2}$

$x = -\frac{5}{2}$.

• $9x - 6 = 5 - 3x$

$9x - 6 + 6 = 5 - 3x + 6$

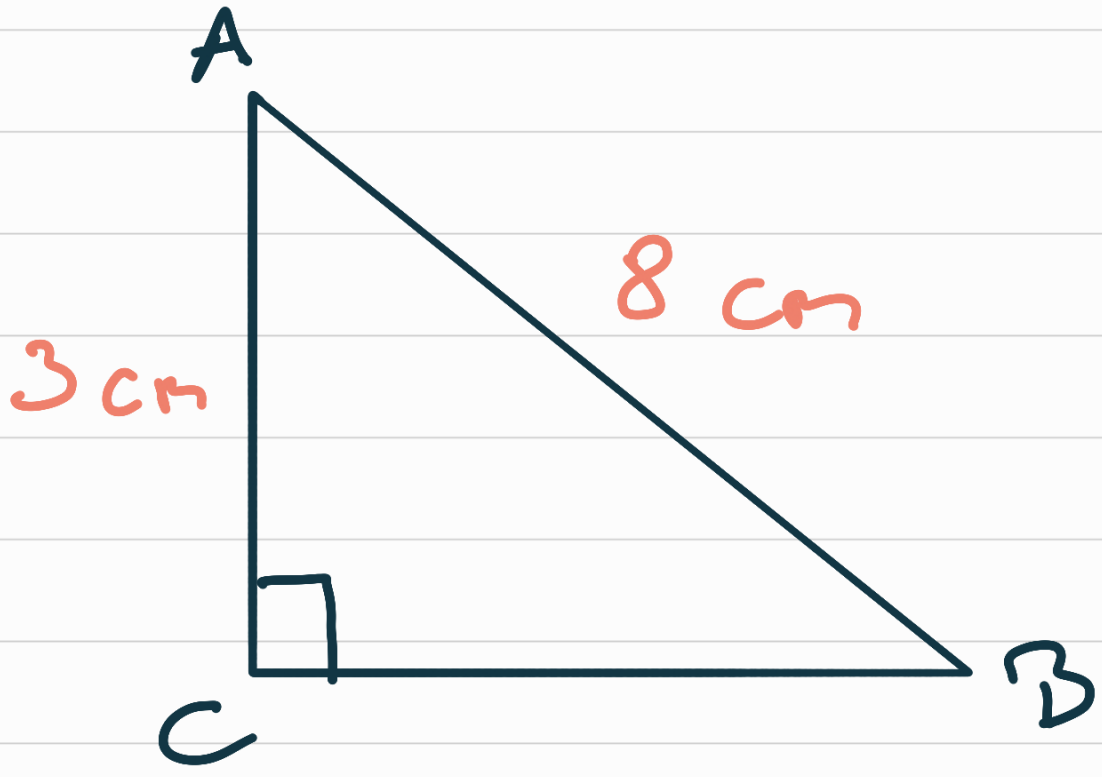
$9x = 11 - 3x$

$9x + 3x = 11 - 3x + 3x$

$$\frac{12x}{12} = \frac{11}{12}$$

$$x = \frac{11}{12}$$

exercice :



Calcule l'angle $\widehat{ABC}$.

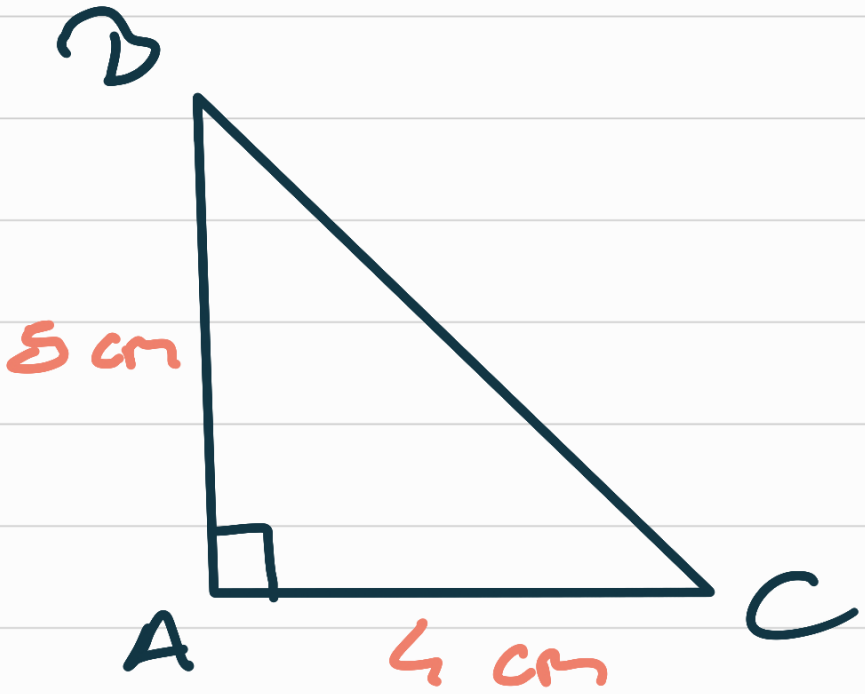
Dans le triangle ABC rectangle en C, on a :

$$\sin\left(\widehat{ABC}\right) = \frac{AC}{AB} = \frac{3}{8}$$

donc $\widehat{ABC} = \sin^{-1}\left(\frac{3}{8}\right)$

$\simeq 22°$

exercice :



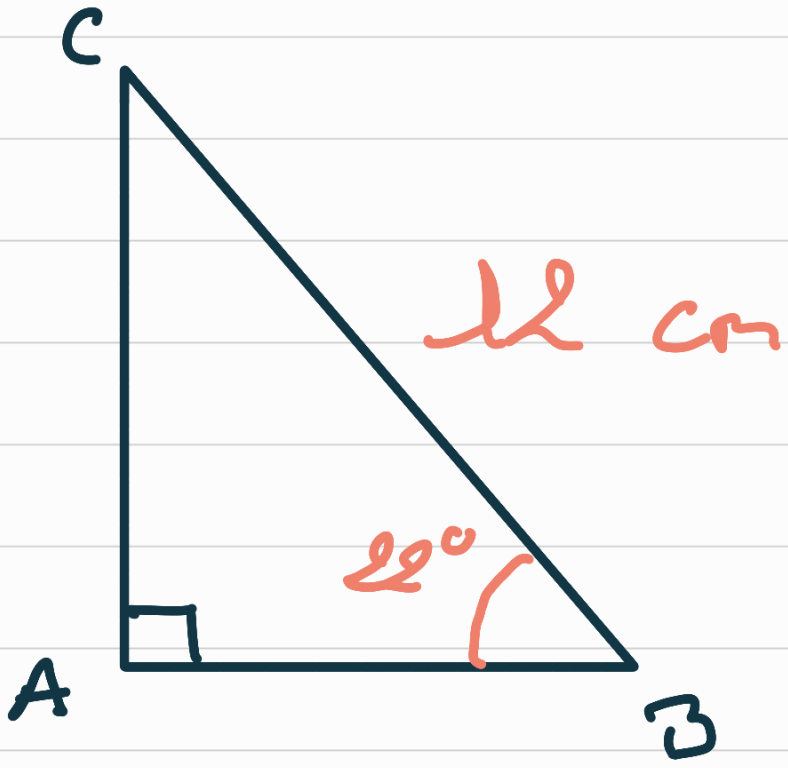
Calculer l'angle $\widehat{ACB}$.

Dans le triangle ABC rectangle en A, on a :

$$\tan(\widehat{ACB}) = \frac{BA}{AC} = \frac{5}{4}$$

donc $\widehat{ACB} = \tan^{-1}\left(\frac{5}{4}\right) \simeq 51°$.

exercice :



Calculer la longueur AB.

Dans le triangle ABC rectangle en A, on a :

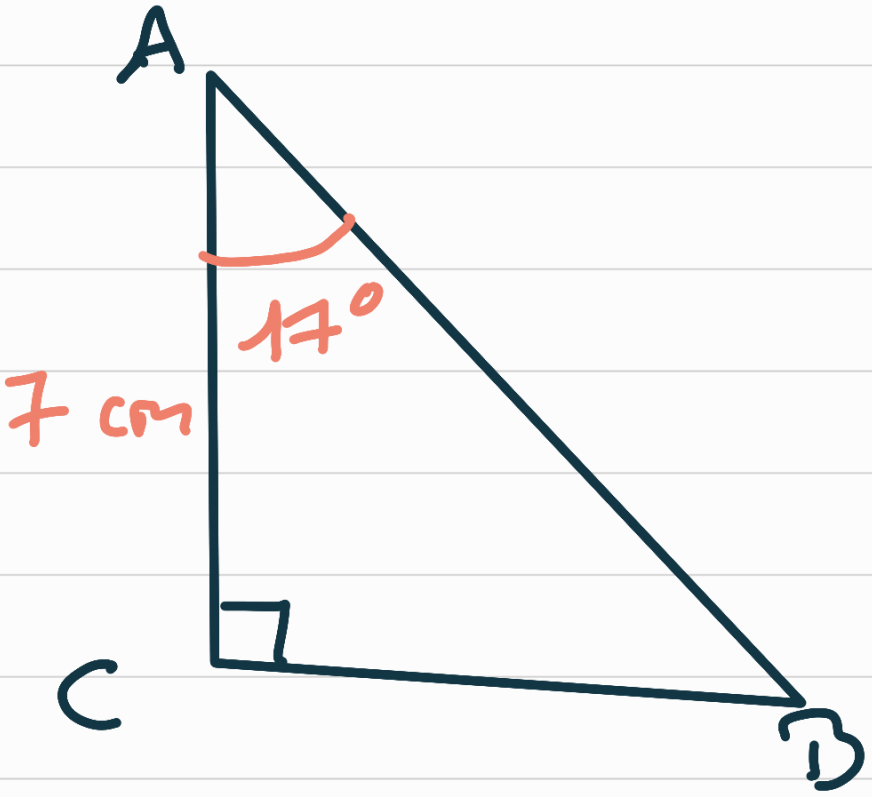
$$\cos(\widehat{ABC}) = \frac{AB}{BC}$$

$$\cos(22°) = \frac{AB}{12}$$

donc $AD = \cos(22°) \times 12$

$\simeq 11$ cm.

exercice :



Calculer par pythagore BC.

Dans le triangle ABC rectangle en C, on a :

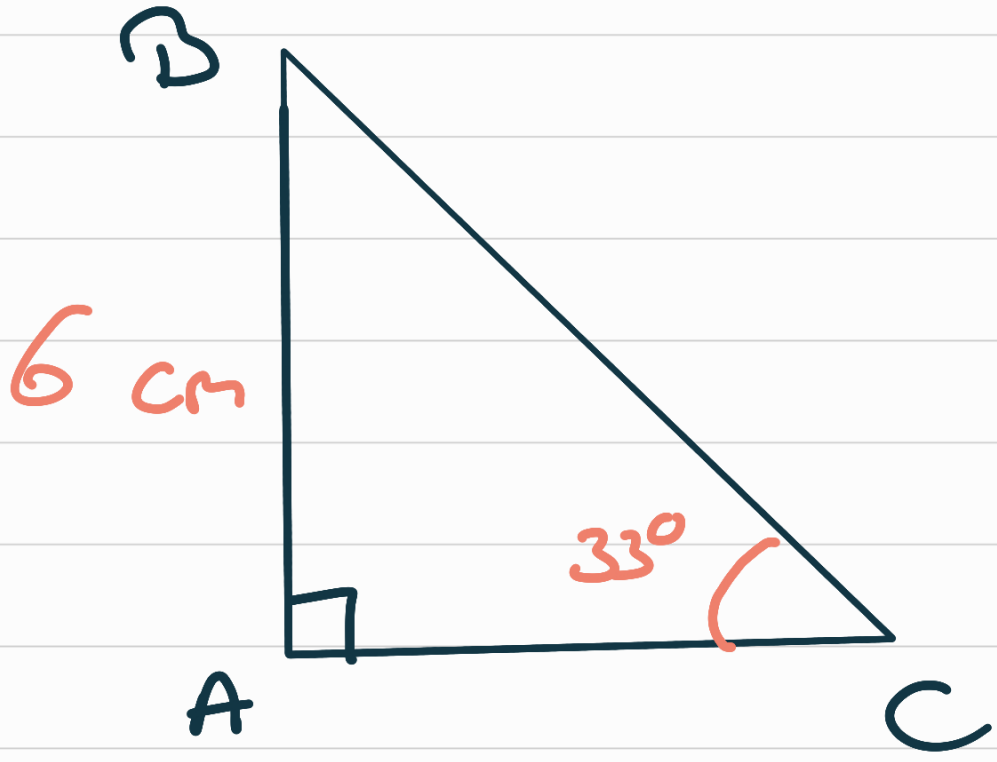
$$\tan(\widehat{CAB}) = \frac{BC}{AC}$$

$$\tan(17°) = \frac{BC}{7}$$

donc $BC = \tan(17°) \times 7$

$\simeq 2,1$ cm.

exercice :



Calculer la longueur BC.

Dans le triangle ABC rectangle en A,

$$\sin(\widehat{ACB}) = \frac{AB}{BC}$$

$$\sin(33°) = \frac{6}{BC}$$

donc $BC = \dfrac{6 \times 1}{\sin(33)} \simeq 11$ cm.