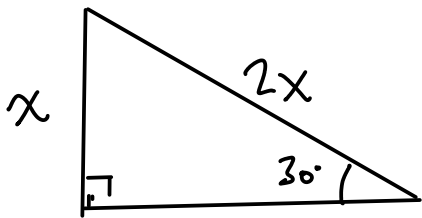


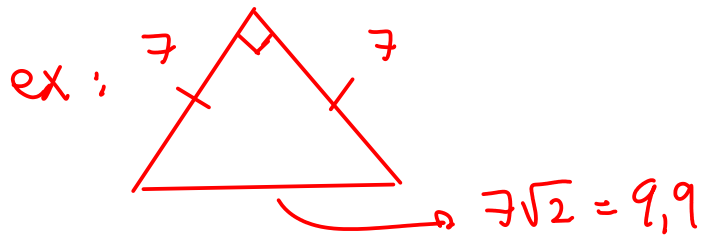
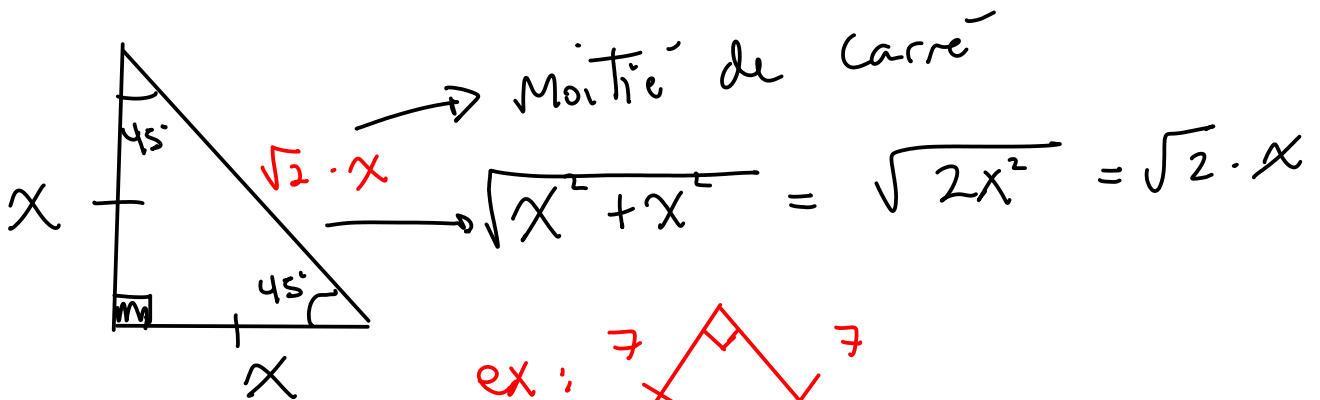
# Cas particuliers $\triangle$

# 1. cas  $\triangle$  rectangle possédant un angle de  $30^\circ$



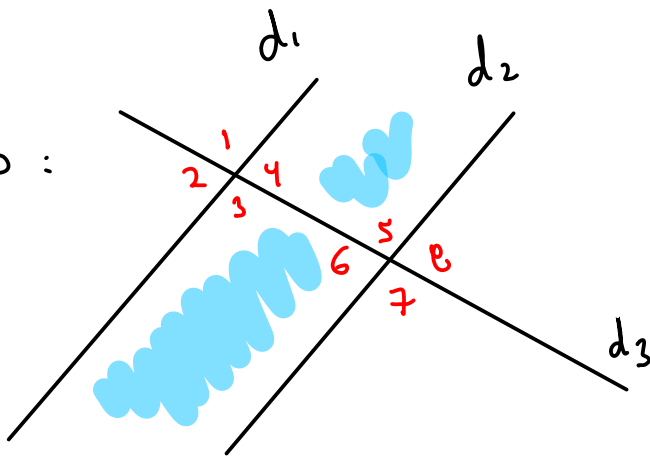
Côté opposé à  $30^\circ$  = moitié de l'hypoténuse

# 2 Triangles isocèles rectangles



\* Angles :

$d_1 // d_2$



$\left. \begin{array}{l} \angle 1 \text{ et } \angle 3 \\ \angle 2 \text{ et } \angle 4 \\ \angle 5 \text{ et } \angle 7 \\ \angle 6 \text{ et } \angle 8 \end{array} \right\}$  opposés par le sommet

$\left. \begin{array}{l} \angle 2 \text{ et } \angle 6 \\ \angle 1 \text{ et } \angle 5 \\ \angle 3 \text{ et } \angle 7 \\ \angle 4 \text{ et } \angle 8 \end{array} \right\}$  angles correspondants

$\left. \begin{array}{l} \angle 1 \text{ et } \angle 7 \\ \angle 2 \text{ et } \angle 8 \end{array} \right\}$  Alternes - externes

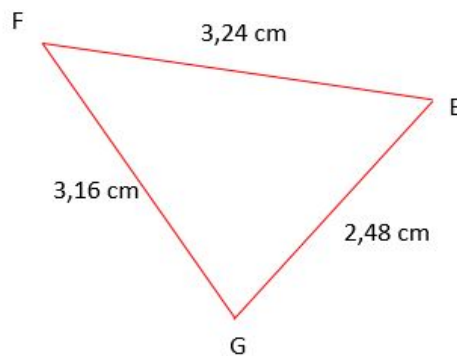
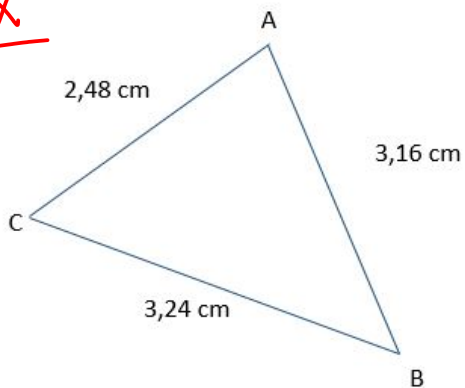
$\left. \begin{array}{l} \angle 3 \text{ et } \angle 5 \\ \angle 4 \text{ et } \angle 6 \end{array} \right\}$  Alternes - internes

$\hat{m}$  mesure si  $d_1 // d_2$ .

# Cas de congruence (isométrie) des $\Delta$

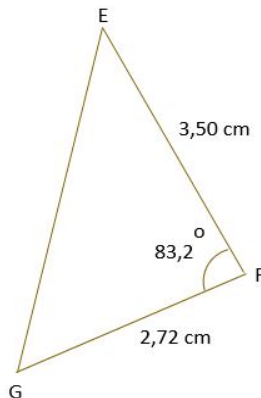
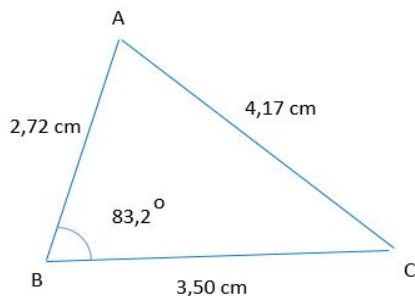
## #1 cas CCC

ex



$m\overline{CA} = m\overline{GE}$  (différence)  
 $\overline{CB} \cong \overline{FE}$  (segment)  
 $m\overline{BC} = m\overline{FG}$   
 (raison:  $\tilde{m}$  mesure)

## #2 cas CAC



Affirmations

$$\angle B \cong \angle F$$

$$\overline{AB} \cong \overline{GF}$$

$$\overline{BC} \cong \overline{EF}$$

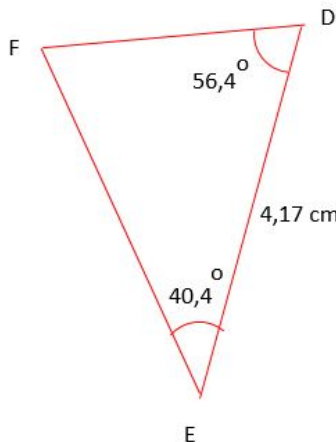
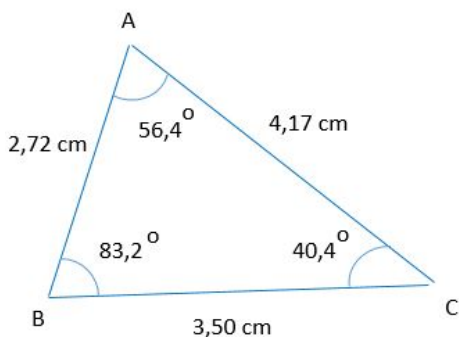
Justifications

$\tilde{m}$  mesure

" " "

" " "

## #3 cas ACA



$$\angle D \cong \angle A \quad " \quad " \quad "$$

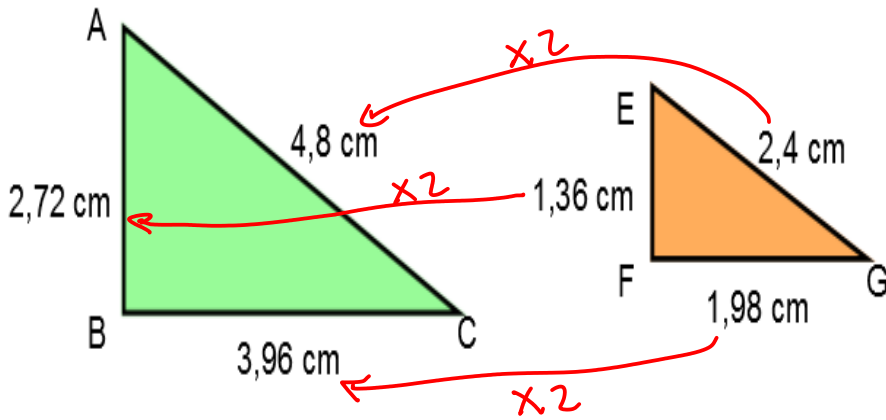
$$\angle E \cong \angle C \quad " \quad " \quad "$$

$$\overline{DE} \cong \overline{AC} \quad " \quad " \quad "$$

# Cas de similitude des $\triangle$

## #1 cas CCC

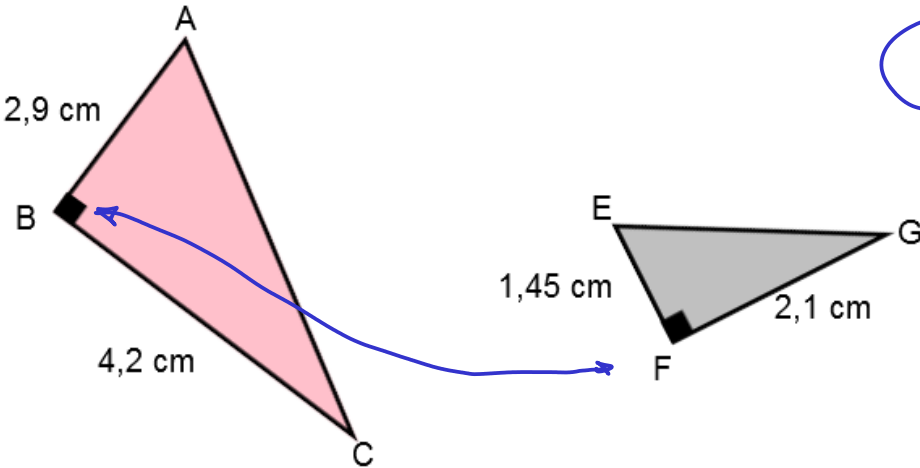
ex:



Rapport  $(k) = 2$   
 $\triangle ABC \sim \triangle EFG$   
 semblable

## #2 cas CAC

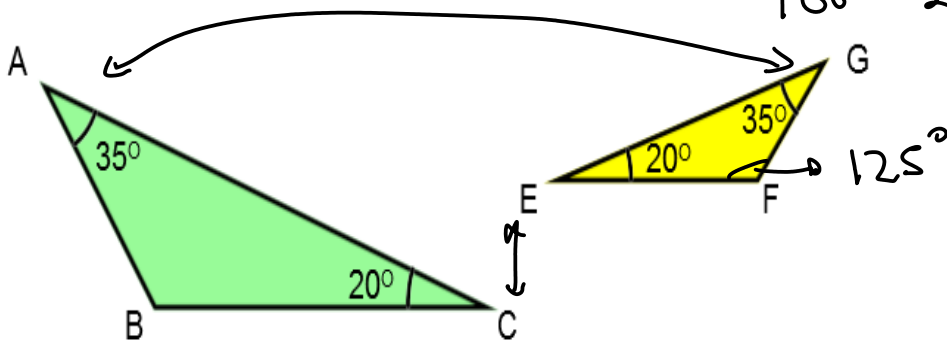
ex:



$k = 2$

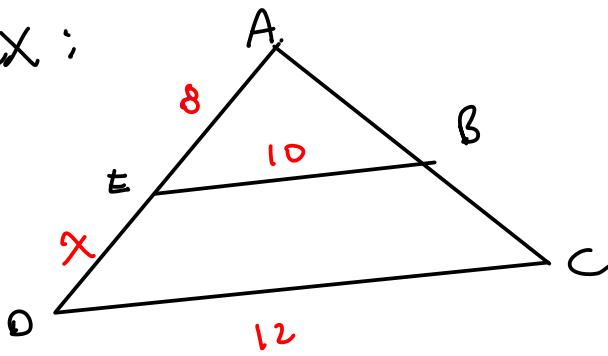
Angle est entre  
 les côtés de  $\hat{m}$   
 rapport

## #3 cas AA (si on connaît 2 angles, $180 - 2 \text{ angles} = 3^{\text{e}} \text{ angle}$ )



# Recherche de mesure manquante

ex:



info:  $\triangle ABE \sim \triangle ADC$

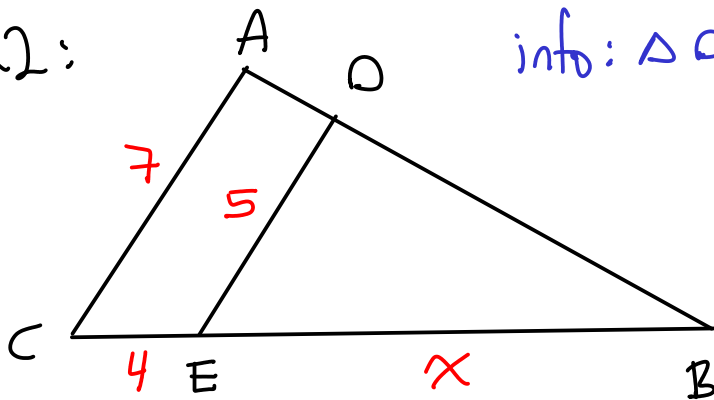
$$\frac{\overline{EB}}{\overline{DC}} = \frac{\overline{AE}}{\overline{AD}} \Rightarrow \frac{10}{12} = \frac{8}{AD}$$

$$m \overline{AD} = 9,6$$

$$\overline{AD} - \overline{AE} = \overline{DE}$$

$$9,6 - 8 = 1,6$$

ex2:



info:  $\triangle DEB \sim \triangle CAB$

$$\frac{7}{5} = \frac{4+x}{x}$$

$$7x = 5(4+x)$$

$$7x = 20 + 5x$$

$$2x = 20$$

$$x = 10$$

## Relations métriques dans le $\triangle$ rectangle

Formules

$$\#1: c_1^2 + c_2^2 = H^2$$

$$\#2: p_1 \cdot p_2 = h^2$$

$$\#3: c_1 \cdot c_2 = H \cdot h$$

$$\#4: c_1^2 = p_1 \cdot H$$

$$\#5: c_2^2 = p_2 \cdot H$$

