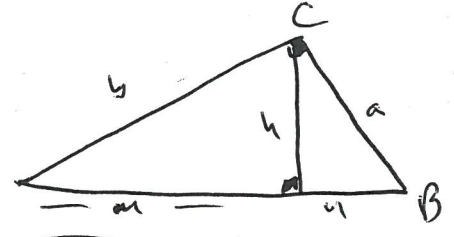


1/2 heure de travail

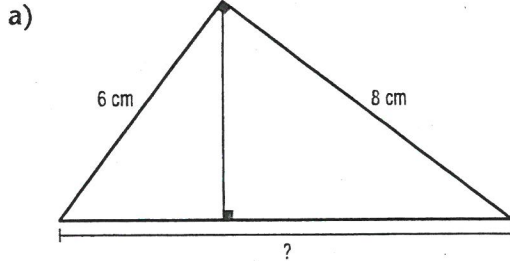
Les relations métriques



$$\begin{aligned} h^2 &= m \times n \\ a^2 &= n \times c \\ b^2 &= m \times c \\ a \times b &= c \times h \end{aligned}$$

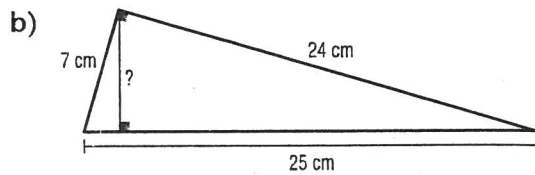
1 Observez les triangles rectangles ci-dessous. Dans chaque cas :

- 1) cherchez la mesure manquante;
- 2) formulez l'énoncé géométrique qui permet ce calcul.



1)  $8^2 + 6^2 = \sqrt{100} \Rightarrow 10 \text{ cm}$

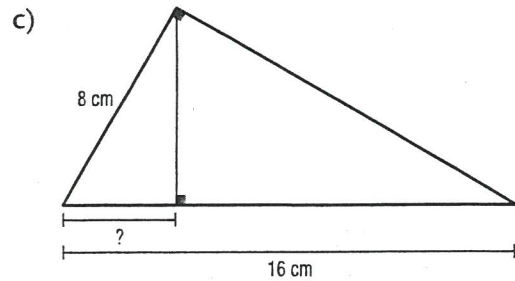
2) Relation de pythagore



$a \times b = c \times h$

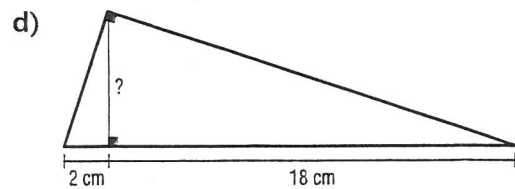
1)  $7 \times 24 = 25 \times h \Rightarrow 6,72 \text{ cm}$

2)  $a \times b = c \times h$



1)  $64 = n(16) \Rightarrow 4 \text{ cm}$

2)  $a^2 = n \times c$



1)  $h^2 = 2 \times 18 \Rightarrow 6 \text{ cm}$

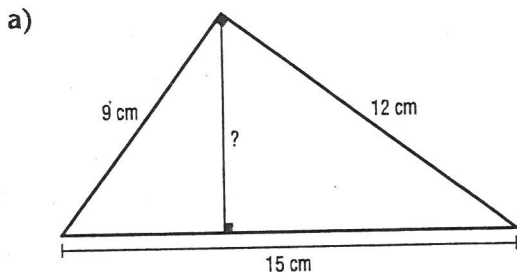
2)  $h^2 = m \times n$

Nom : \_\_\_\_\_

Groupe : \_\_\_\_\_ Date : \_\_\_\_\_

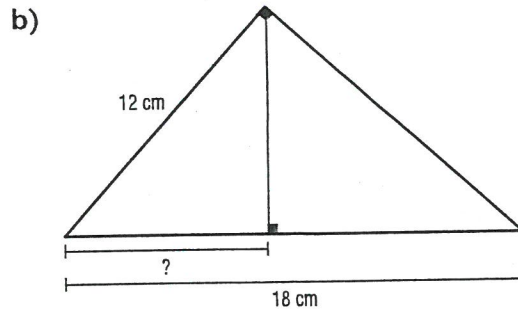
(suite)

2 Dans chaque cas, cherchez la mesure manquante.



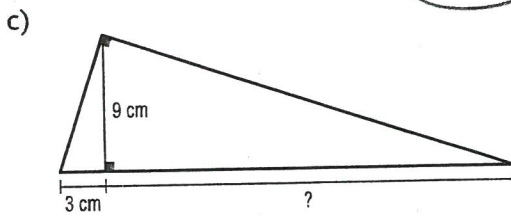
$a \times b = c \times h$

$9 \times 12 = 15 \times h \Rightarrow 7,2 \text{ cm}$



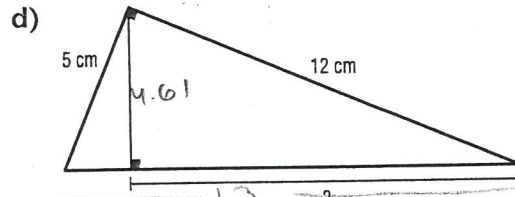
$a^2 = h \times c$

$12^2 = 18 \times h \Rightarrow 8 \text{ cm}$



$h^2 = m \times n$

$81 = 3 \times m \Rightarrow 27 \text{ cm}$



$12^2 + 5^2 = 13 = c$

$a \times b = c \times h$

$5 \times 12 = 13 \times h \Rightarrow h = 4.61$

$5^2 - 4.61^2 = 1.97$

$13 - 1.97 = 11,07$

3 Observez la figure ci-contre et déterminez :

a) m  $\overline{BC}$

20 cm

b) m  $\overline{AC}$

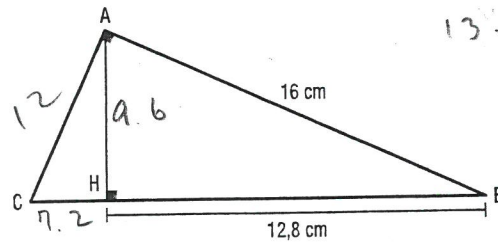
12 cm

c) m  $\overline{CH}$

7,2 cm

d) m  $\overline{AH}$

9,6 cm



1) Pythagore  
2)  $h^2 = m \times n$   
3) Pythagore