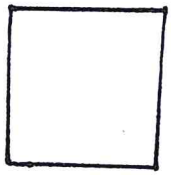
Le 6 avril/2017

4.5 Le volume d'un prisme rectangulaire

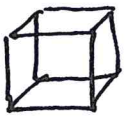
Un rappel:

1D →

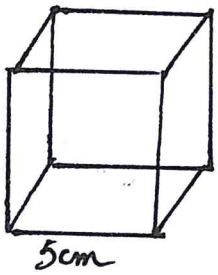
2D →



3D →



Ex1: Le volume d'un cube:



Quel est le volume de ce cube ayant une largeur de 5cm?

$V = l \cdot l \cdot h$ ou $V = L^3$

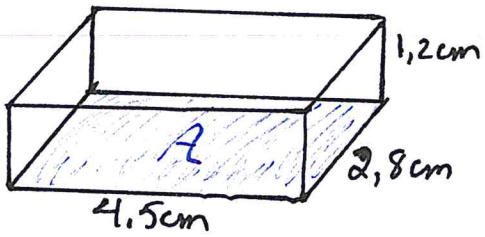
ou

$V = L \cdot L \cdot L$

$V = (5cm)(5cm)(5cm)$

$V = 125cm^3$

Ex2:



Stratégie 1

$V = L \cdot l \cdot h$

$V = (4.5cm)(2,8cm)(1.2cm)$

$V = 15,12\ cm^3$

Stratégie 2

$V = A \cdot h$

$V = (L \times l) \cdot h$

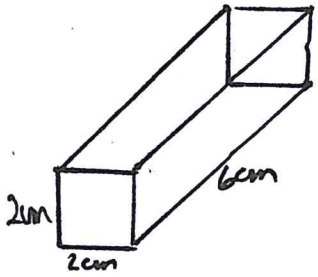
$V = (4.5cm)(2.8cm) \cdot h$

$V = 12.6cm^2 \times h$

$V = (12.6cm^2)(1.2cm)$

$V = 15,12\ cm^3$

Ex3 : Trace 2 différents prismes droits à base rectangulaire dont le volume est $24 cm^3$. (Essaye d'en trouver un 3e !)



$V = (2cm)(2cm)(6cm)$

$V = 24 cm^3$

Combinaisons possibles

① $V = (2cm)(2cm)(6cm)$

$V = 24 cm^3$

② $V = (1cm)(1cm)(24cm)$

$V = 24 cm^3$

③ $V = (1cm)(2cm)(12cm)$

$= 24 cm^3$

④ $V = (3cm)(1cm)(8cm)$

$V = 24 cm^3$

⑤ $V = (6cm)(4cm)(1cm)$

$V = 24 cm^3$

⑥ $V = (4cm)(3cm)(2cm)$

$V = 24 cm^3$