

PAGE DE FORMULES

AIRE

<u>Rectangle</u>	$A=lw$	(Longueur x largeur)
<u>Triangle</u>	$A=bh/2$	(base x hauteur divisé par 2)
<u>Carré</u>	$A=c^2$	(côté x côté)
<u>Cercle</u>	$A=\pi r^2$	(pi x rayon x rayon)
<u>Parallélogramme</u>	$A=bh$	(base x hauteur)

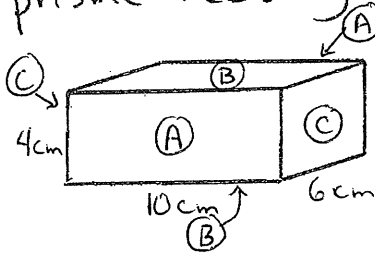
CIRCONFÉRENCE D'UN CERCLE

$$C=\pi d \quad (\text{pi x diamètre})$$

NOTE $\pi = 3,14$ (approx.)

Le développement des figures 3-dimensionnelles et le calcul de l'aire

prisme rectangulaire:



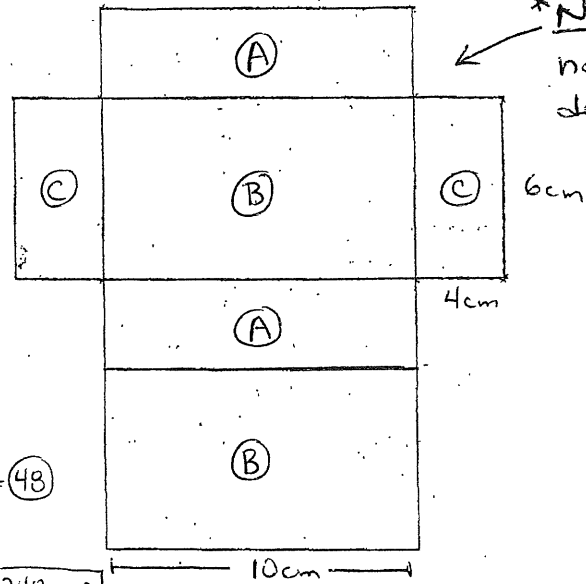
Travail:

$$\begin{aligned} \text{Aire}_A &= L \times l \\ &= 10 \times 4 \\ &= 40 \times 2 = \mathbf{80} \end{aligned}$$

$$\begin{aligned} \text{Aire}_B &= L \times l \\ &= 10 \times 6 \\ &= 60 \times 2 = \mathbf{120} \end{aligned}$$

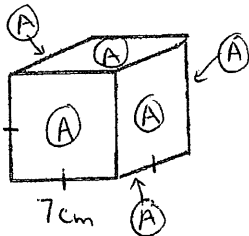
$$\begin{aligned} \text{Aire}_C &= L \times l \\ &= 6 \times 4 \\ &= 24 \times 2 = \mathbf{48} \end{aligned}$$

Total: $80 + 120 + 48 = \mathbf{248 \text{ cm}^2}$



*Note: Ceci est nommé un développement

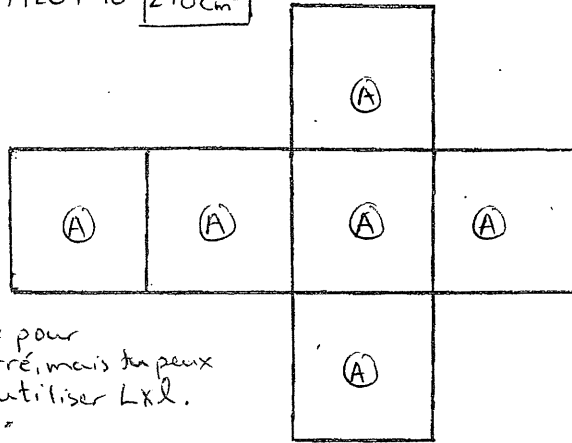
cube:



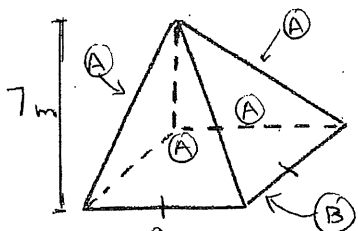
Travail:

$$\begin{aligned} \text{Aire}_A &= c^2 \\ &= 7^2 \\ &= 49 \times 6 = \mathbf{294 \text{ cm}^2} \end{aligned}$$

Note: Formule pour un carré, mais tu peux aussi utiliser $L \times l$.



pyramide:

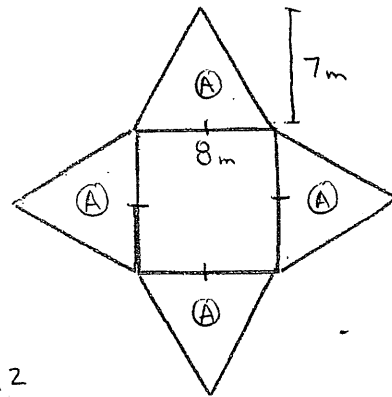


Travail:

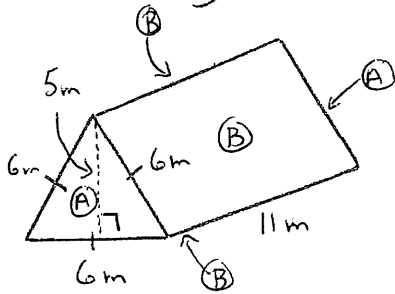
$$\begin{aligned} \text{Aire}_A &= \frac{bh}{2} \\ &= \frac{8 \times 7}{2} \\ &= 28 \times 4 = \mathbf{112} \end{aligned}$$

$$\begin{aligned} \text{Aire}_B &= c^2 \\ &= 8^2 \\ &= \mathbf{64} \end{aligned}$$

Total: $112 + 64 = \mathbf{176 \text{ m}^2}$



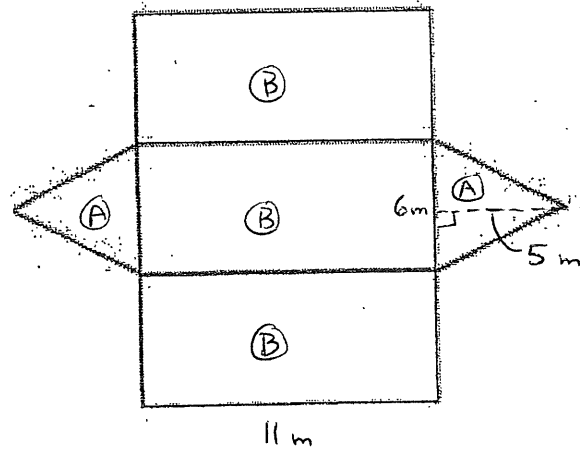
prisme triangulaire 1:



Travail:

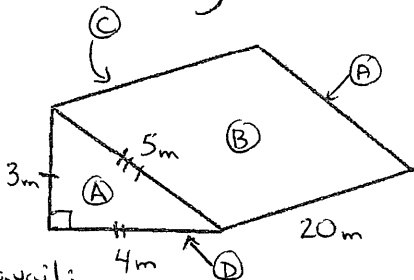
$$\begin{aligned} \text{Aire}_A &= \frac{bh}{2} \\ &= \frac{6 \times 5}{2} \\ &= 15 \times 2 = \mathbf{30} \end{aligned}$$

$$\begin{aligned} \text{Aire}_B &= L \times l \\ &= 11 \times 6 \\ &= 66 \times 3 \\ &= \mathbf{198} \end{aligned}$$



$$\text{Aire totale: } 198 + 30 = \mathbf{228 \text{ m}^2}$$

prisme triangulaire 2:



Travail:

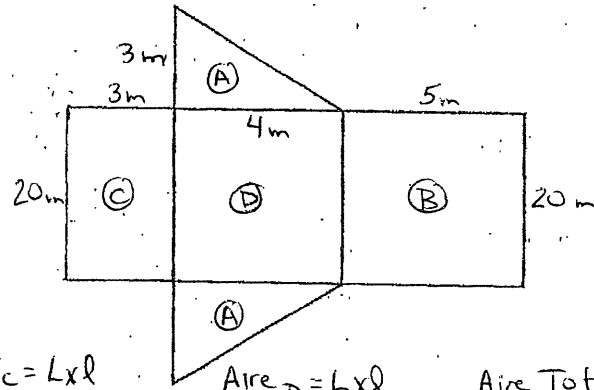
$$\begin{aligned} \text{Aire}_A &= \frac{bh}{2} \\ &= \frac{4 \times 3}{2} \\ &= 6 \times 2 = \mathbf{12} \end{aligned}$$

$$\begin{aligned} \text{Aire}_B &= L \times l \\ &= 20 \times 5 \\ &= \mathbf{100} \end{aligned}$$

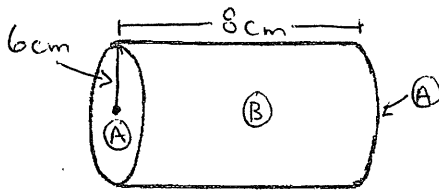
$$\begin{aligned} \text{Aire}_C &= L \times l \\ &= 20 \times 3 \\ &= \mathbf{60} \end{aligned}$$

$$\begin{aligned} \text{Aire}_D &= L \times l \\ &= 20 \times 4 \\ &= \mathbf{80} \end{aligned}$$

$$\begin{aligned} \text{Aire Totale:} \\ 12 + 100 + 60 + 80 = \\ \mathbf{252 \text{ m}^2} \end{aligned}$$



cylindre:



Travail:

$$\begin{aligned} \text{Aire}_A &= \pi r^2 \text{ (ou } \pi \times r \times r) \\ &= 3,14 \times 6^2 \\ &= 113,04 \times 2 \\ &= \mathbf{226,08} \end{aligned}$$

Etape extra
Circonférence du cercle
 $C = \pi d$
 $C = 3,14 \times 12$
 $C = 37,68$
(Note: 2 fois le rayon)
ceci devient la longueur du rectangle

$$\begin{aligned} \text{Aire}_B &= L \times l \\ &= 37,68 \times 8 \\ &= \mathbf{301,44} \end{aligned}$$

$$\begin{aligned} \text{Aire totale:} \\ 226,08 + 301,44 = \\ \mathbf{527,52 \text{ cm}^2} \end{aligned}$$

