

Réponses

RÉVISION: L'AIRE DE LA SURFACE

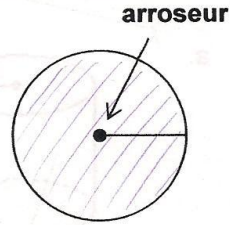
1. Un arroseur rotatif de pelouse couvre un rayon de 5 m.

Quelle est l'aire de la surface arrosée?

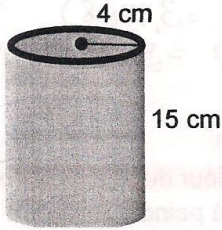
$$A = \pi r^2$$

$$= 3,14(5)(5)$$

$$= \boxed{78,5 \text{ m}^2}$$



2. La figure représente une boîte de conserve. Quelle est l'aire de l'étiquette?



$$C = \pi d$$

$$= 3,14(4)$$

$$= 25,12 \text{ cm}$$

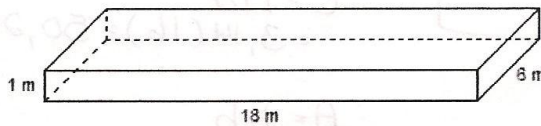
$$A = bh$$

$$= 25,12 \text{ cm}(15 \text{ cm})$$

$$= \boxed{376,8 \text{ cm}^2}$$

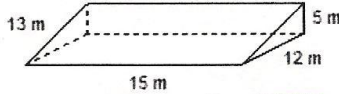
3. Calcule l'aire totale des prismes ci-dessous :

a.



18 m 1 m $(\times 2)$	6 m 1 m $(\times 2)$	18 m 6 m $(\times 2)$
$A = bh$ $= 18(1)$ $= 18 \text{ m}^2$ $\times 2$ 36 m^2	$A = bh$ $= 6(1)$ $= 6 \text{ m}^2$ $\times 2$ 12 m^2	$A = bh$ $= 18(6)$ $= 108 \text{ m}^2$ $\times 2$ 216 m^2

b.

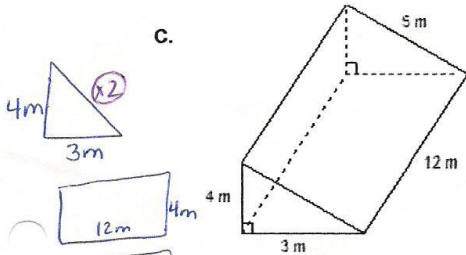


$$A = 264 \text{ m}^2$$

$$A = 660 \text{ m}^2$$

$(\times 2)$ 12 m 5 m	15 m 5 m	15 m 12 m	15 m 13 m
$A = \frac{bh}{2}$ $= \frac{12(5)}{2} = 30 \text{ m}^2 \times 2$ $= 60 \text{ m}^2$	$A = bh$ $= 15(5)$ $= 225 \text{ m}^2$	$A = bh$ $= 15(12)$ $= 180 \text{ m}^2$	$A = bh$ $= 15(13)$ $= 195 \text{ m}^2$

c.



$$A = 156 \text{ m}^2$$

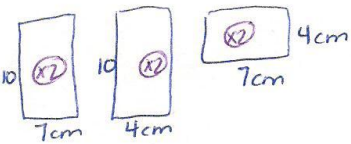
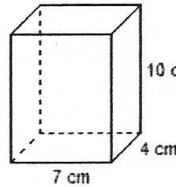
$$A = \frac{bh}{2} = \frac{4(3)}{2} = 6 \text{ m}^2 \times 2 = 12 \text{ m}^2$$

$$A = bh = 12(4) = 48 \text{ m}^2$$

$$A = bh = 12(3) = 36 \text{ m}^2$$

$$A = bh = 12(5) = 60 \text{ m}^2$$

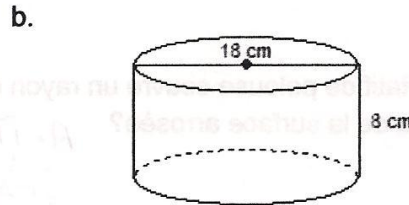
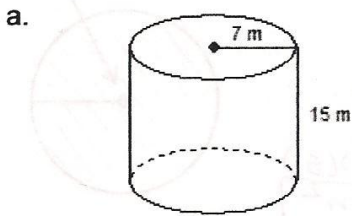
d.



$$A = 276 \text{ cm}^2$$

$A = bh$ $= 7(10)$ $= 70 \text{ cm}^2$ $\times 2$ 140 cm^2	$A = bh$ $= 4(10)$ $= 40 \text{ cm}^2$ $\times 2$ 80 cm^2	$A = bh$ $= 7(4)$ $= 28 \text{ cm}^2$ $\times 2$ 56 cm^2
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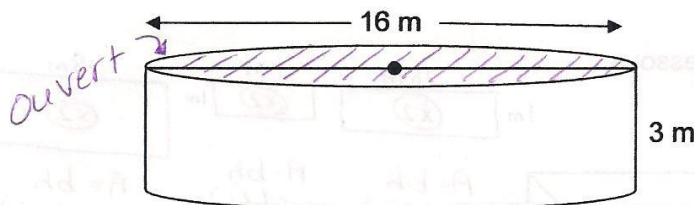
4. Détermine l'aire totale de chaque cylindre :



$$\begin{aligned}
 A &= \pi r^2 & C &= \pi d & A &= bh \\
 &= 3,14(7)(7) & &= 3,14(14) & &= 43,96(15) \\
 &= 153,86\text{m}^2 & &= 43,96\text{m} & &= 659,4\text{m}^2 \\
 &\times 2 & & & & \\
 \hline
 &307,72\text{m}^2 & & \boxed{A = 967,12\text{m}^2} & &
 \end{aligned}$$

$$\begin{aligned}
 A &= \pi r^2 & C &= \pi d & A &= bh \\
 &= 3,14(9)(9) & &= 3,14(18) & &= 56,52(8) \\
 &= 254,34\text{cm}^2 & &= 56,52\text{cm} & &= 452,16\text{cm}^2 \\
 &\times 2 & & & & \\
 \hline
 &508,68\text{cm}^2 & & \boxed{A = 960,84\text{cm}^2} & &
 \end{aligned}$$

5. Le dessus d'un réservoir d'eau cylindrique est ouvert. Si l'intérieur du réservoir doit être peint, y compris le plancher, quelle est l'aire de la surface à peindre au mètre carré près?



$$\begin{aligned}
 A &= \pi r^2 \\
 &= 3,14(8)(8) = 200,96\text{m}^2 \\
 C &= \pi d \\
 &= 3,14(16) = 50,24\text{m}
 \end{aligned}$$

$$\begin{aligned}
 A &= bh \\
 &= 50,24(3) \\
 &= 150,72\text{m}^2
 \end{aligned}$$

$$\boxed{A = 351,68\text{m}^2}$$