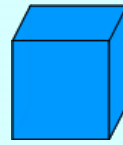
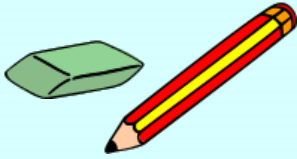


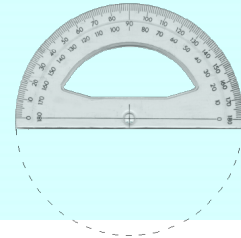
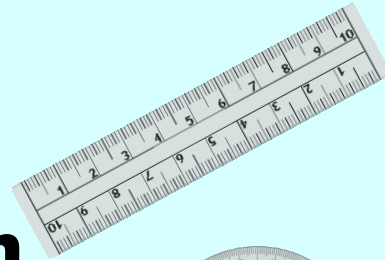
mathématiques 9e année



le mercredi 24 octobre 2018



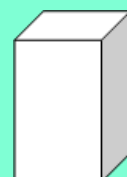
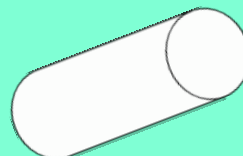
Mme Barton



maths 9^e Shape and Space (SS)

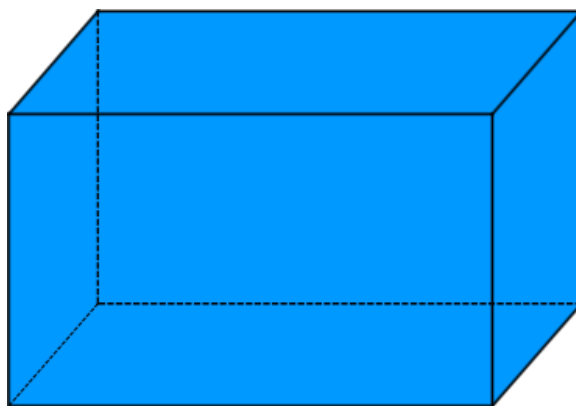
But du cours: SS2

Détermine l'aire de la surface
(l'aire totale) des objets trois-
dimensionnelles (3D) afin de
résoudre des problèmes connexes.

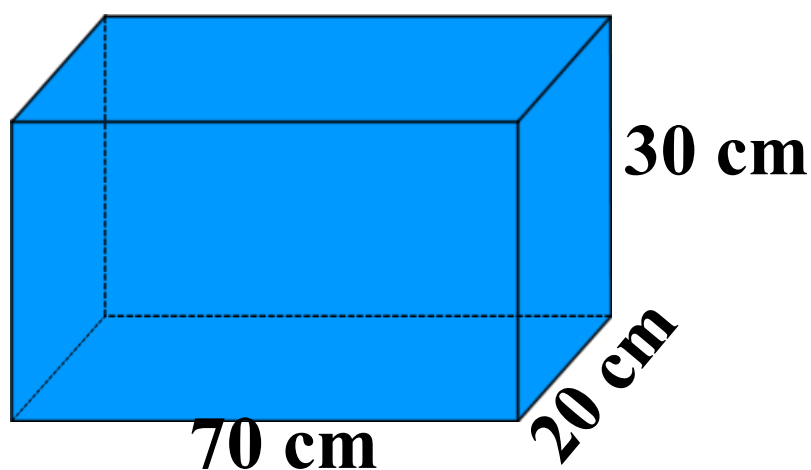


L'aire de la surface
des prismes et des cylindres

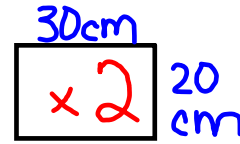
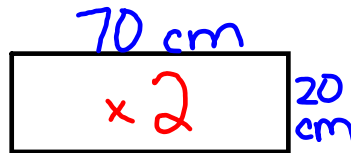
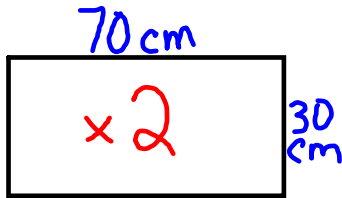
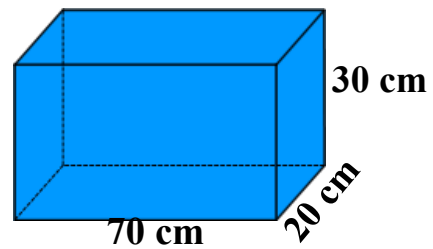
Pour trouver l'aire de la surface, on additionne les aires de toutes les faces.



Trouve l'aire de la surface du prisme.



Trouve l'aire de la surface du prisme.



$$\begin{aligned}
 A &= 2Ll + 2Ll + 2Ll \\
 &= 2(70\text{cm})(30\text{cm}) + 2(70\text{cm})(20\text{cm}) + 2(30\text{cm})(20\text{cm}) \\
 A &= 4200\text{cm}^2 + 2800\text{cm}^2 + 1200\text{cm}^2 \\
 \boxed{A} &= \boxed{8200\text{cm}^2}
 \end{aligned}$$

La surface totale des cylindres

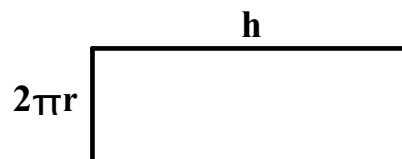
Un cylindre a deux bases circulaires

$$A = 2(\pi r^2)$$



Le corps du cylindre a une aire rectangulaire, qui forme la surface courbe.

$$A = 2\pi r \times h$$

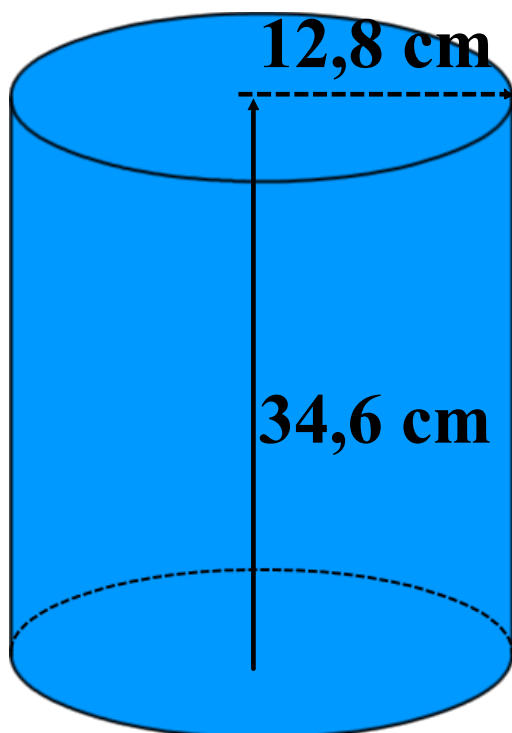


Alors,

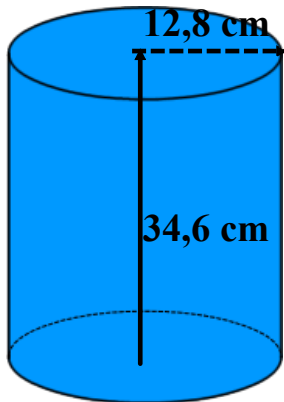
la surface totale d'un cylindre

$$A = 2\pi r^2 + 2\pi rh$$

Trouve la surface totale de ce cylindre.



Trouve la surface totale de ce cylindre.



$$A = 2\pi r^2 + 2\pi rh$$

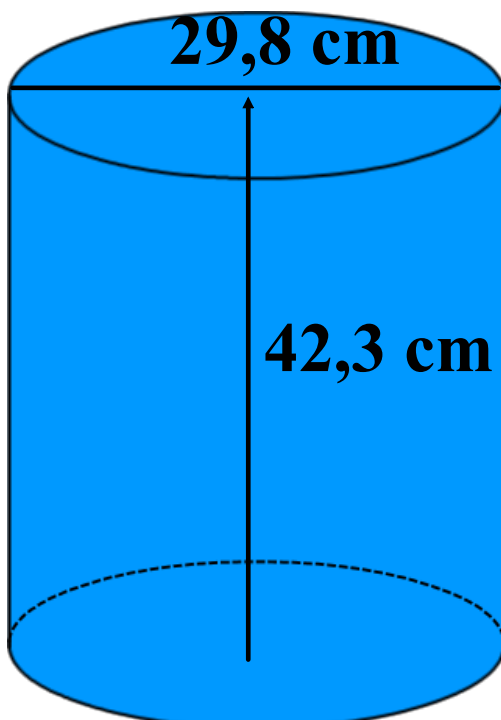
$$= 2(3,14)(12,8\text{cm})^2 + 2(3,14)(12,8\text{cm})(34,6\text{cm})$$

$$= 1028,9152\text{cm}^2 + 2781,2864\text{cm}^2$$

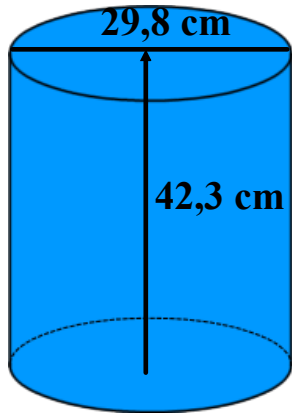
$$A = 3810,2016\text{cm}^2$$

$$A = 3810,2\text{cm}^2$$

Trouve la surface totale de ce cylindre.



Trouve la surface totale de ce cylindre.



$$A = 2\pi r^2 + 2\pi rh$$

$$A = 2(3,14)(14,9\text{ cm})^2 + 2(3,14)(14,9\text{ cm})(42,3\text{ cm})$$

$$= 1394,2228\text{ cm}^2 + 3958,0956\text{ cm}^2$$

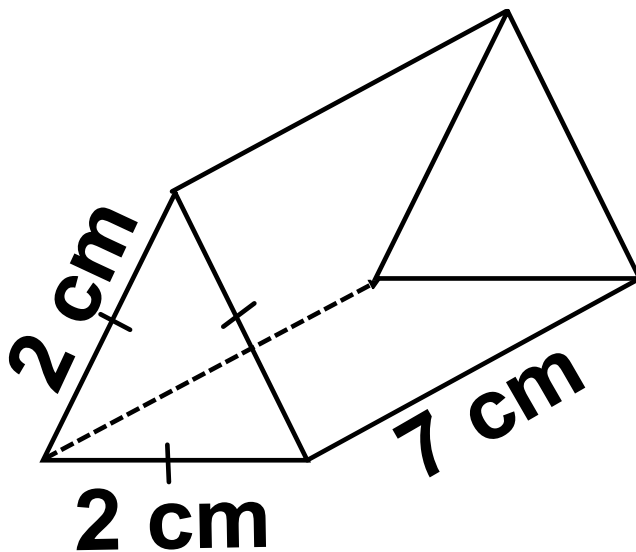
$$d = 29,8\text{ cm}$$

$$= 5352,3184\text{ cm}^2$$

$$r = 14,9\text{ cm}$$

$$A = 5352,3\text{ cm}^2$$

- Fais le croquis des faces.
- Calcule l'aire de la surface.



Calcule la surface totale de ce prisme.

$$\text{hyp}^2 = h^2 + 1^2$$

$$2^2 = h^2 + 1^2$$

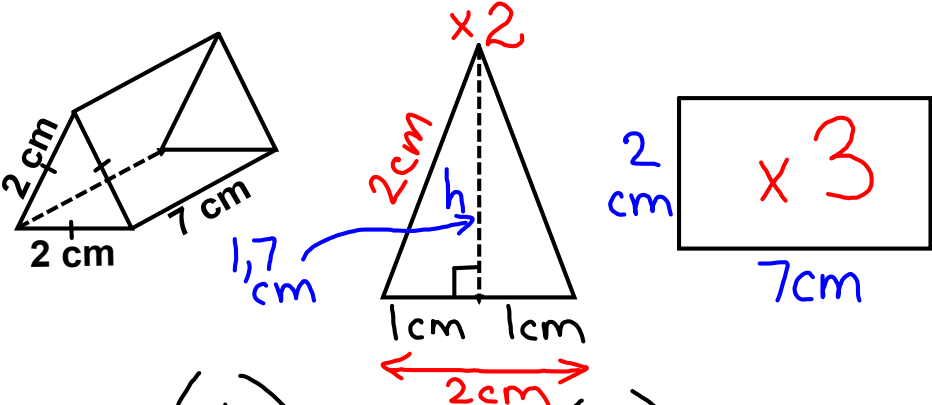
$$4 = h^2 + 1$$

$$3 = h^2$$

$$\sqrt{3} = h$$

$$1,7 \approx h$$

$h \approx 1,7$



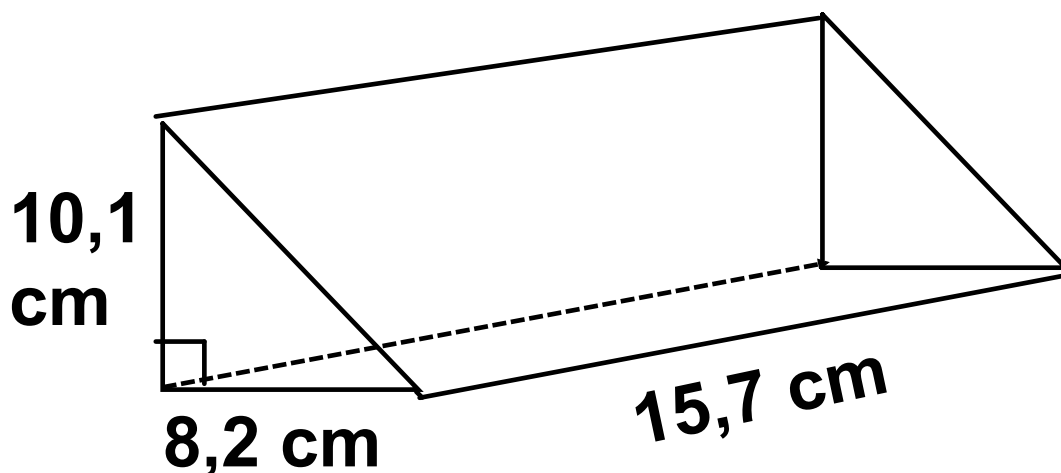
$$A = 2 \left(\frac{bh}{2} \right) + 3(bh)$$

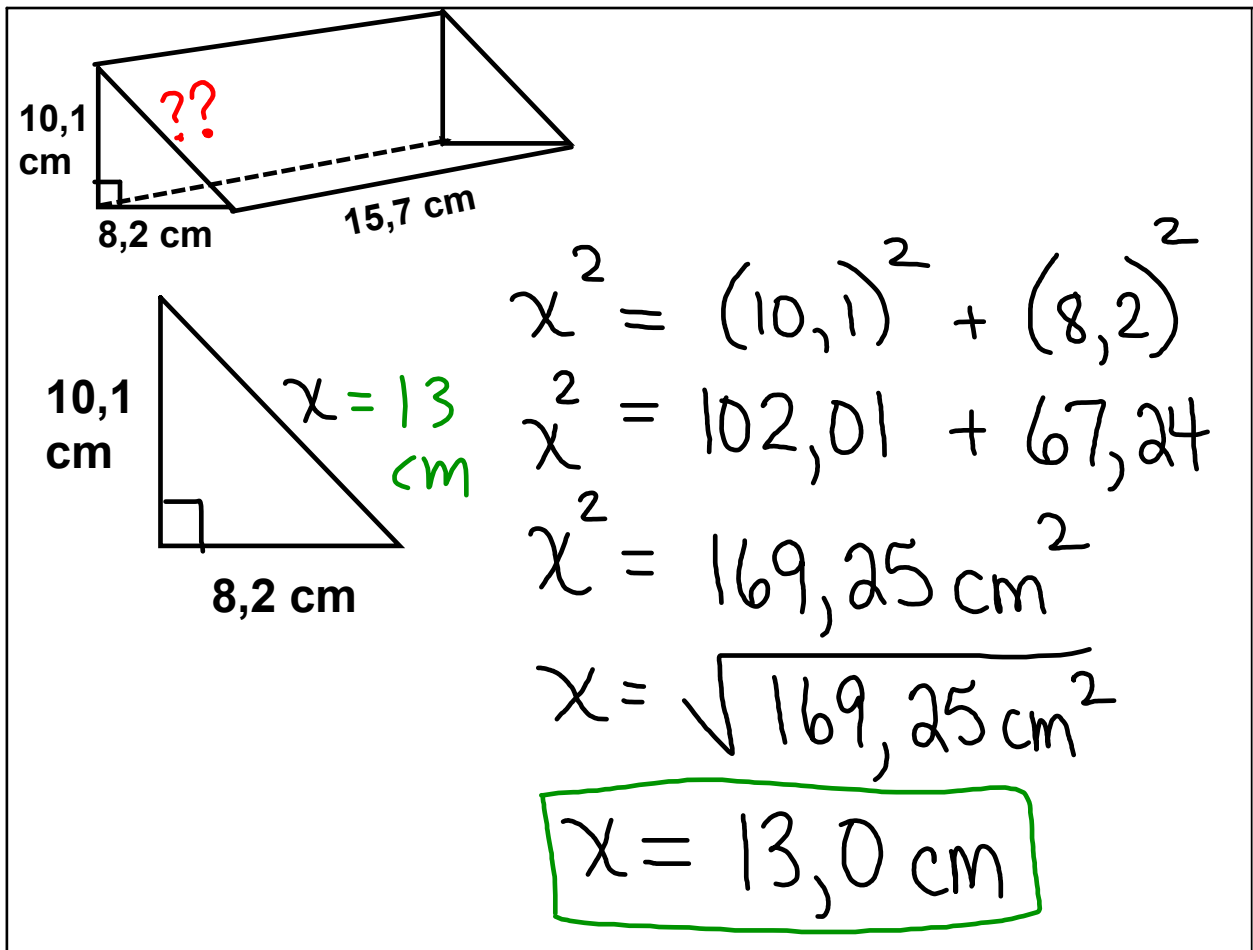
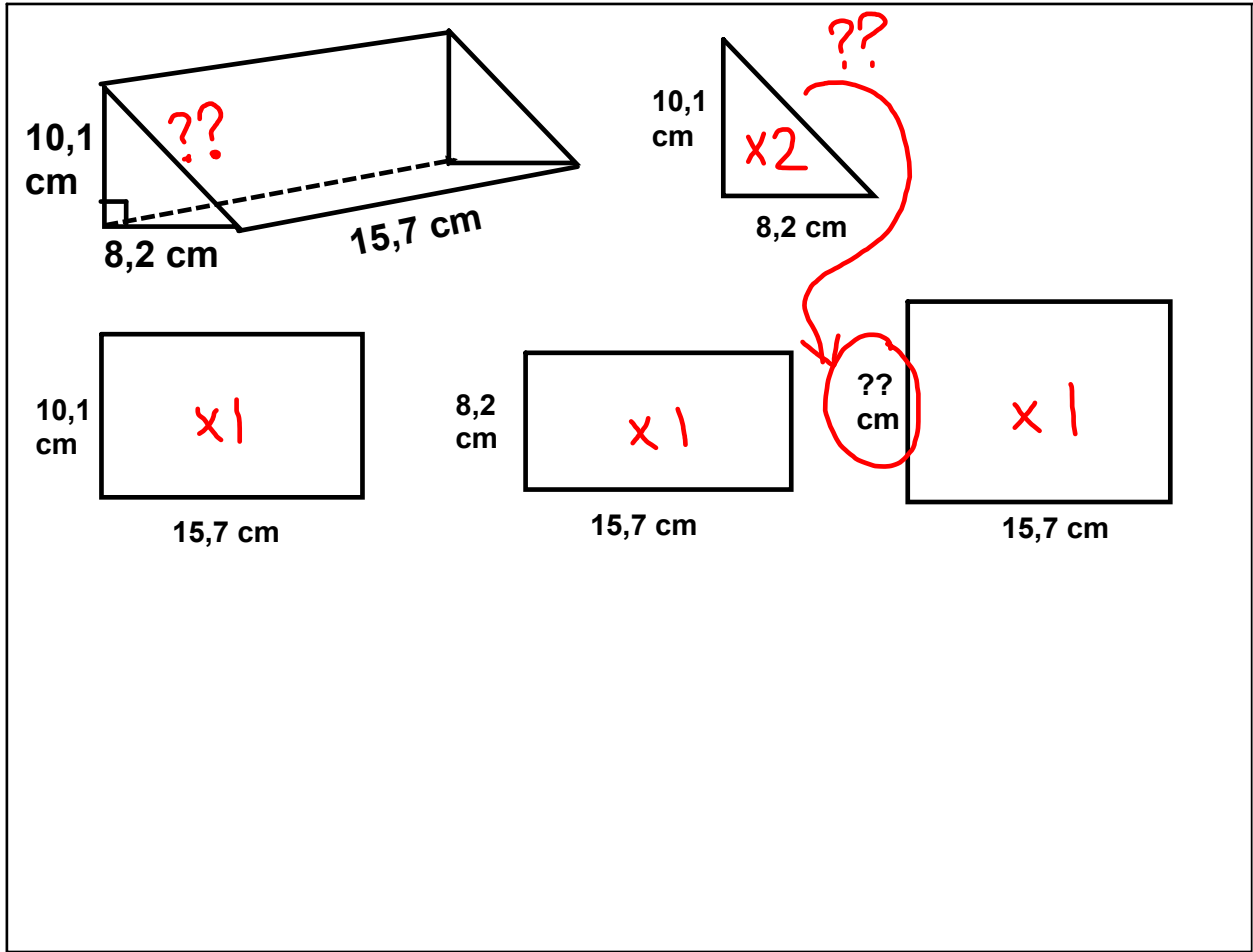
$$A = 2 \left(\frac{2\text{cm} \times 1,7\text{cm}}{2} \right) + 3(2\text{cm} \times 7\text{cm})$$

$$A = 3,4\text{cm}^2 + 42\text{cm}^2$$

$$A = 45,4\text{cm}^2$$

- Fais le croquis des faces.
- Calcule l'aire de la surface.





$$A = 2 \left(\frac{bh}{2} \right) + bh + bh + bh$$

$$= 2 \left(\frac{10,1 \times 8,2}{2} \right) + (10,1 \times 15,7) + (8,2 \times 15,7) + (13,0 \times 15,7)$$

$$= 82,82 \text{ cm}^2 + 158,57 \text{ cm}^2 + 128,74 \text{ cm}^2 + 204,10 \text{ cm}^2$$

$$A = 574,23 \text{ cm}^2$$

À remettre demain

Page photocopiée - Questions 1 à 8

À compléter sur ton papier, s-t-p.

Utilise un crayon, une règle et une calculatrice.

- Fais le croquis des faces. (i.e. dessine les faces)
- Calcule l'aire de la surface de chaque figure au dixième près.

Réponses:

$$1) A = 271,52 \text{ cm}^2$$

$$2) A = 3\,089,76 \text{ mm}^2$$

$$3) A = 216 \text{ cm}^2$$

$$4) A = 350,52 \text{ cm}^2$$

(hypoténuse du triangle = 6,5 cm)

Réponses:

$$5) A = 210 \text{ cm}^2$$

$$6) A = 274,5 \text{ m}^2$$

$$7) A = 44,26 \text{ m}^2$$

$$8) A = 391,9 \text{ cm}^2$$

**Fais tes corrections
à ces questions.**

Quelles petites fautes as-tu faites??

Si tu as tout fini:

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**Théorème de
Pythagore**

Questions 5 à 9