

Nom : Date :

Empiler des cubes

Définition

Calculer le volume d'un solide, c'est calculer la place qu'il occupe dans l'espace.

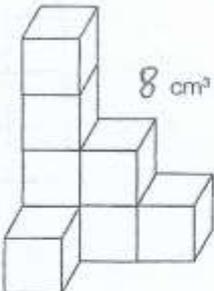
Attention, tous les cubes ne sont pas visibles !

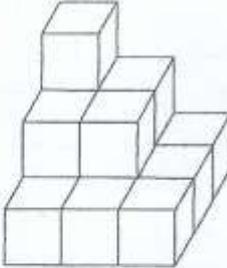


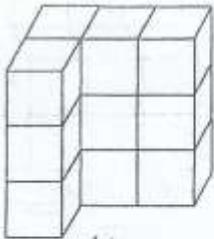
Pratiquement, c'est calculer ou compter le nombre de « cubes étalons » inclus dans ce solide.

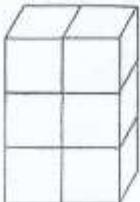
Imagine des solides.
Écris combien de cubes étalons ou cm^3 contient chaque solide.

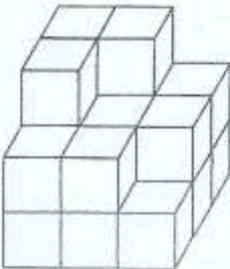

 Cube étalon
 1 cm^3

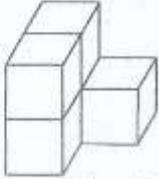

 8 cm^3

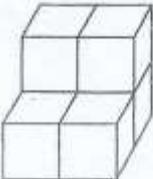

 14 cm^3

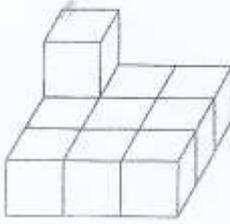

 12 cm^3

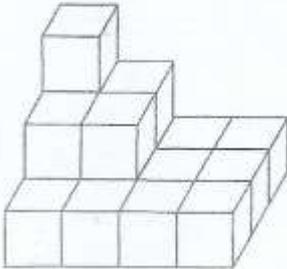

 6 cm^3

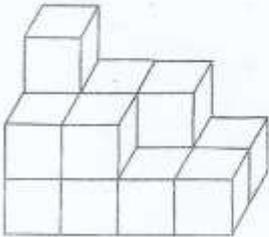

 20 cm^3


 5 cm^3

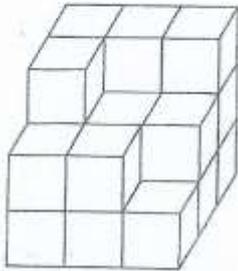

 6 cm^3


 10 cm^3

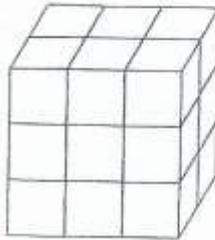

 17 cm^3


 14 cm^3

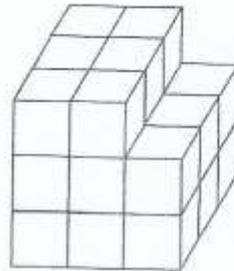
Tu peux tracer les lignes manquantes pour t'aider.



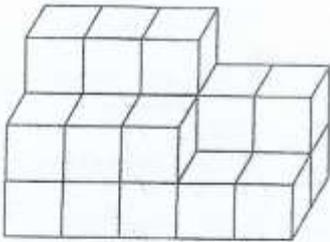
21 cm³



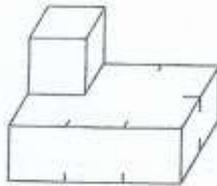
18 cm³



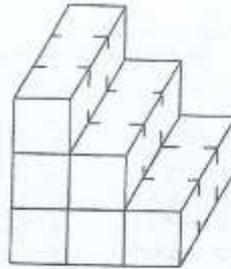
24 cm³



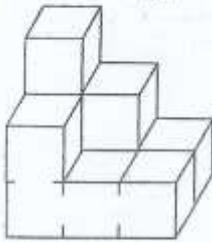
21 cm³



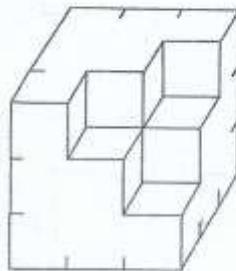
7 cm³



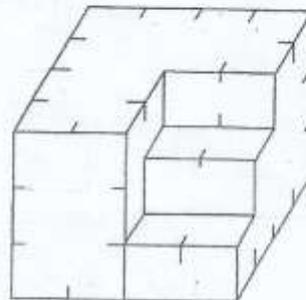
18 cm³



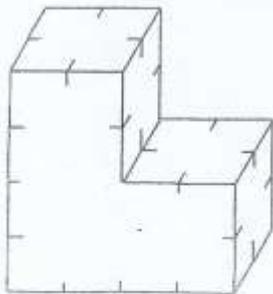
10 cm³



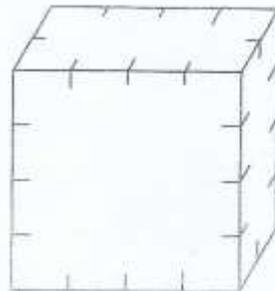
23 cm³



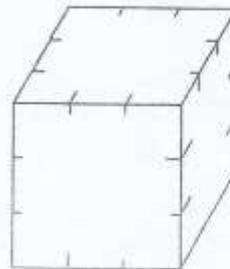
42 cm³



24 cm³



32 cm³

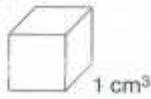


27 cm³

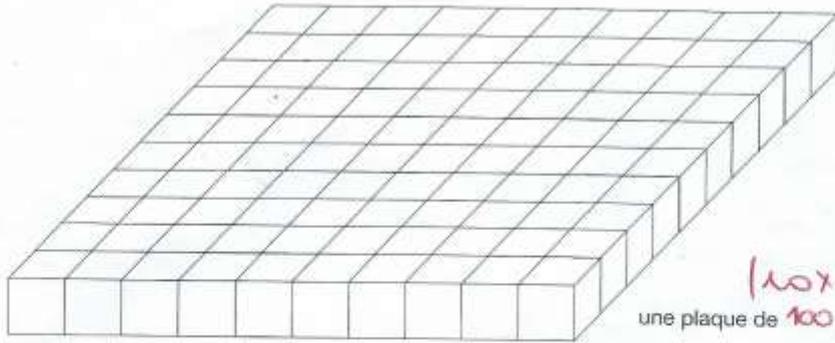
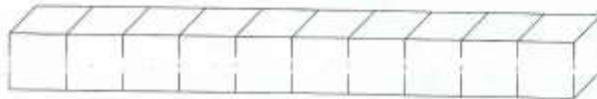
Correctif

Les unités de volume

Combien y a-t-il de cm^3 dans un dm^3 ?



une barette de 10 cm^3



?

Combien y a-t-il de cubes d' 1 cm^3 dans une barette? 10

Combien de barettes faut-il pour former une plaque? 10

Combien de cubes d' 1 cm^3 faut-il pour former une plaque? 100 (10×10)

Combien de plaques faut-il pour former 1 dm^3 ? 10

Combien faut-il de cubes d' 1 cm^3 pour former 1 dm^3 ? 1000

Tire tes conclusions! Complète les égalités.

$$1 \text{ dm}^3 = 1000 \text{ cm}^3$$

$$1 \text{ cm}^3 = 1000 \text{ mm}^3$$

$$1 \text{ cm}^3 = \frac{1}{1000} \text{ dm}^3$$

$$1 \text{ m}^3 = 1000 \text{ dm}^3$$

$$1 \text{ dm}^3 = 1000 \text{ cm}^3$$

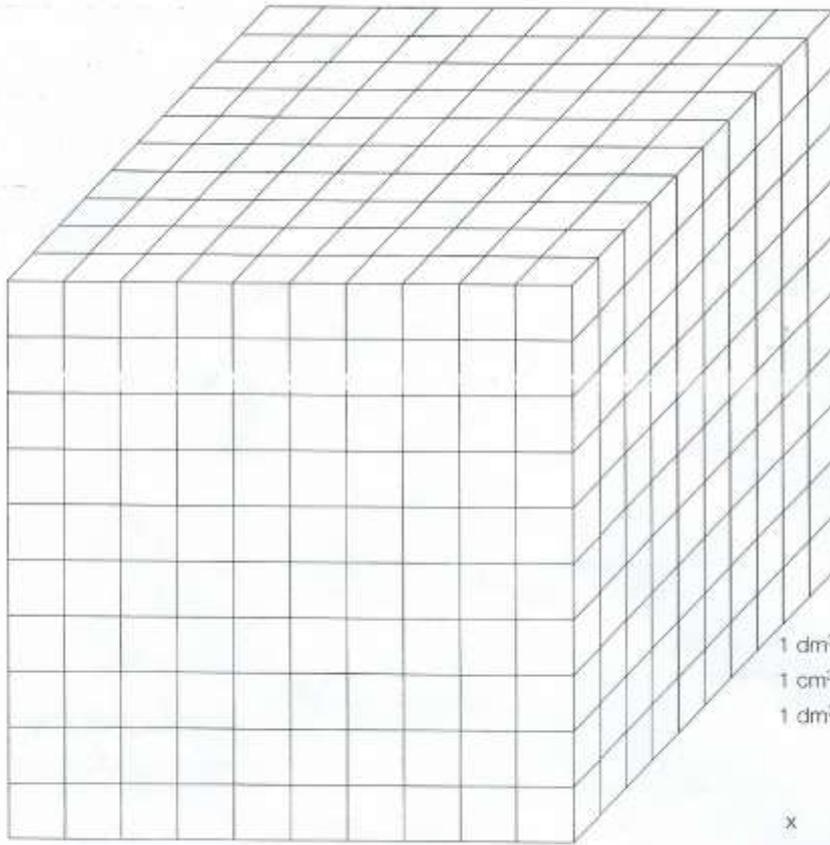
$$1 \text{ mm}^3 = \frac{1}{1000} \text{ cm}^3$$

$$1 \text{ m}^3 = 1000000 \text{ cm}^3$$

$$1 \text{ dm}^3 = \frac{1}{1000} \text{ m}^3$$

$$1 \text{ cm}^3 = \frac{1}{1000000} \text{ m}^3$$

Tu peux observer la construction du dm^3



$$1 \text{ dm}^3 = 1000 \text{ cm}^3$$

$$1 \text{ cm}^3 = 1000 \text{ mm}^3$$

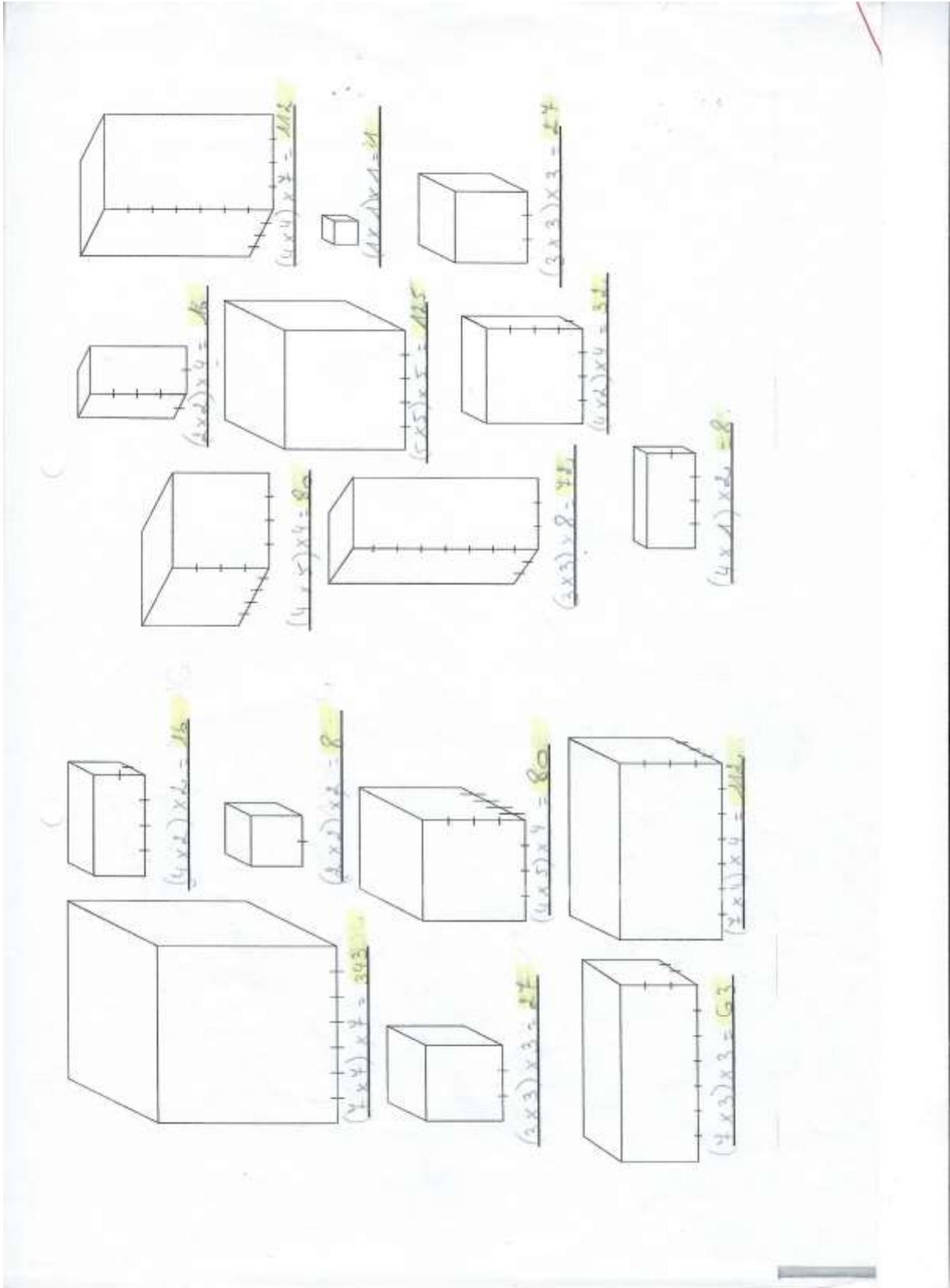
$$1 \text{ dm}^3 = 1000000 \text{ mm}^3$$

x

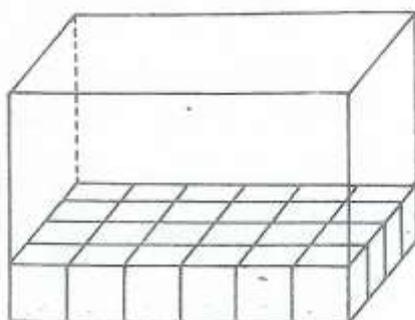
Le rapport qui lie deux unités de volume consécutives est $1000 \times$ + petit grand
 Dans l'abaque des unités de volume, il faudra donc 3



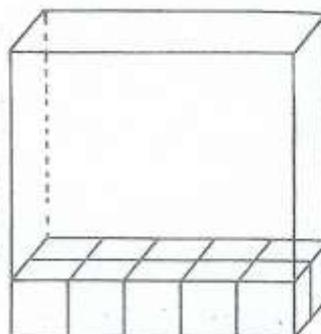
Correctif feuille 3



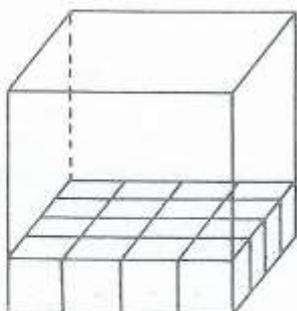
① Donne en cm^3 le volume des parallélépipèdes suivants.



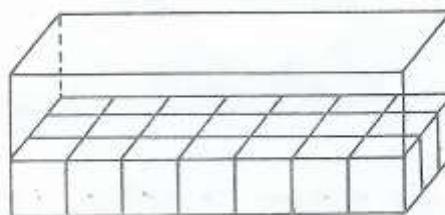
$$6 \times 4 \times 4 = 96 \text{ cm}^3$$



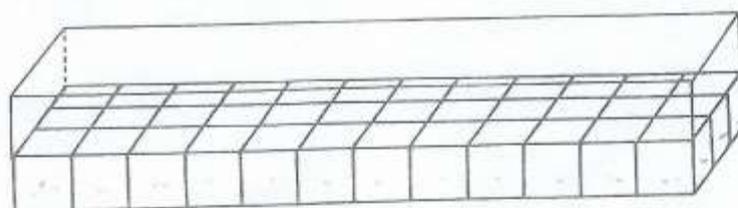
$$5 \times 2 \times 5 = 50 \text{ cm}^3$$



$$4 \times 4 \times 4 = 64 \text{ cm}^3$$



$$7 \times 3 \times 3 = 63 \text{ cm}^3$$



$$12 \times 3 \times 2 = 72 \text{ cm}^3$$

Correctif feuille 5

Prénom: _____

Date: _____

Ma. _____

Savoir structurer l'espace

Coder des montages de cubes

Correctif

1. percevoir

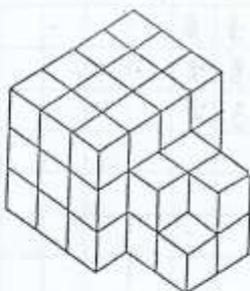
2. chercher

4. exprimer

3. comprendre

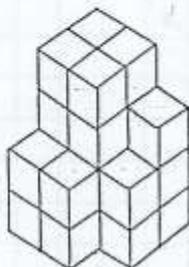


1



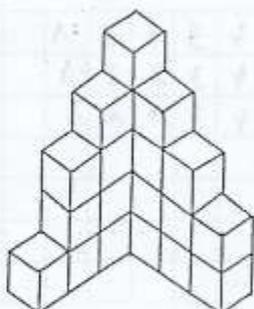
		3	3	3	3		
		3	3	3	3		
		3	3	3	3		
			2	2			
			1	2			

2



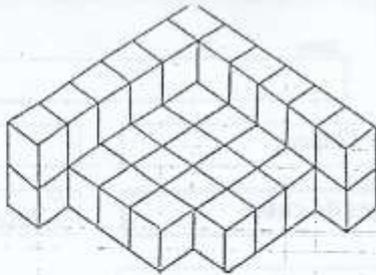
4	4	3					
4	4	2					
2	2						

3



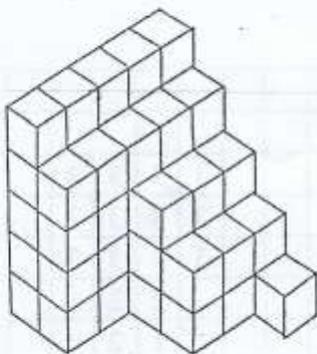
5	4	3	2				
4							
3							
1							

4



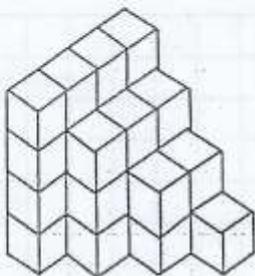
2	2	2	2	2	2			
2	1	1	1	1				
2	1	1	1	1				
2	1	1	1	1				
2	1	1	1					
2								

5



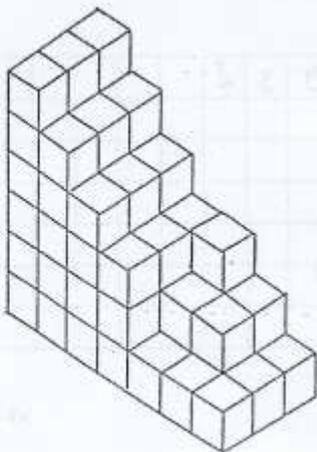
5	4	3	2	1				
5	4	3	2					
5	4	3	2					
5	4							
5	4							

6



4	3	2	1					
4	3	2						
4	3							
4								

7



6	5	4	3	3	2	1		
6	5	4	3	2	2	1		
6	5	4	3	1	1	1		

Correctif feuille 6

