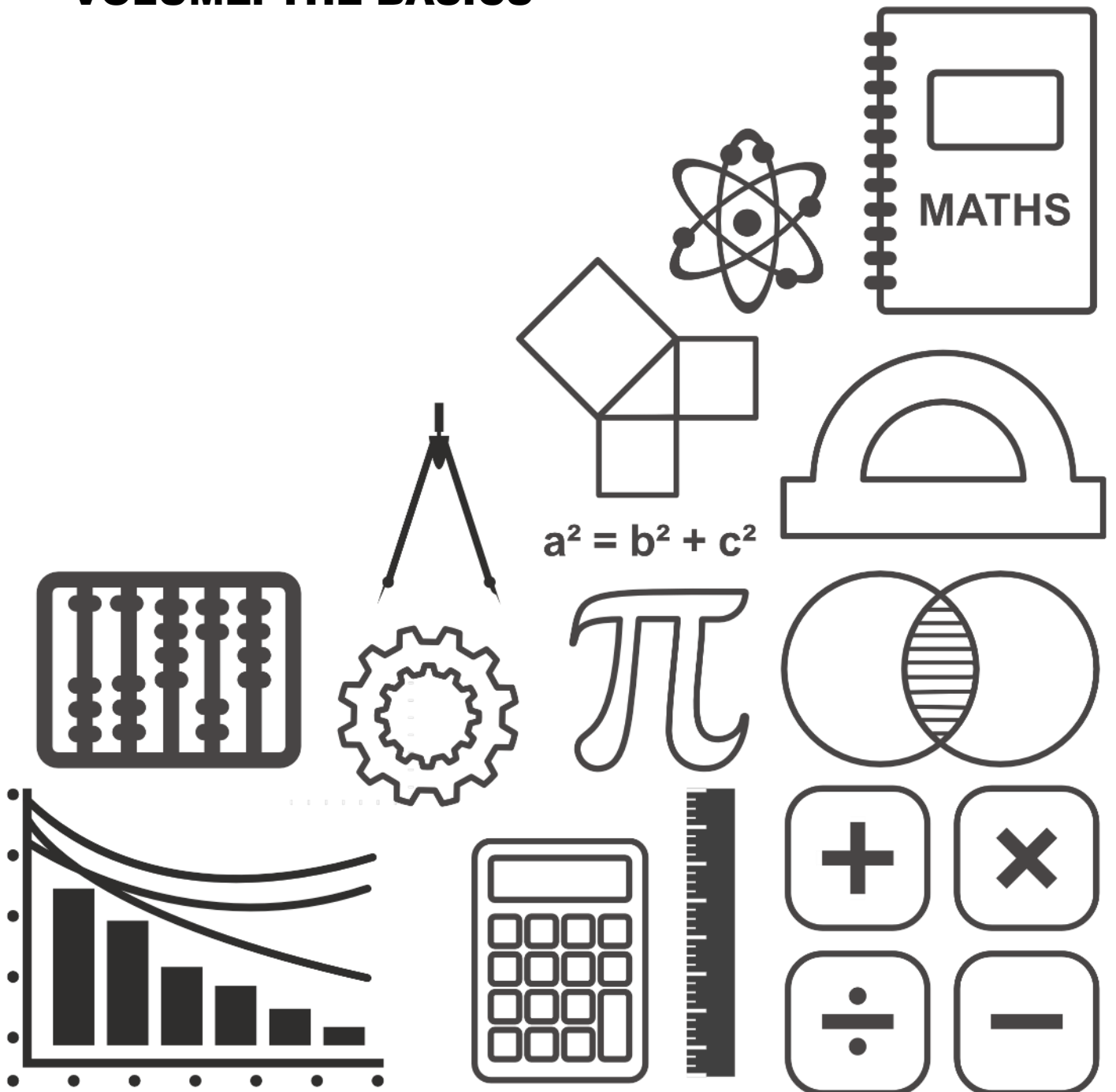
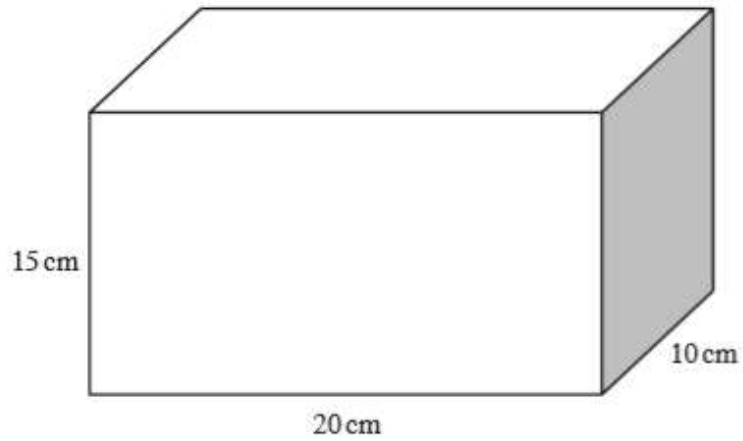


MATHSDIY

GCSE TOPIC BOOKLET VOLUME: THE BASICS



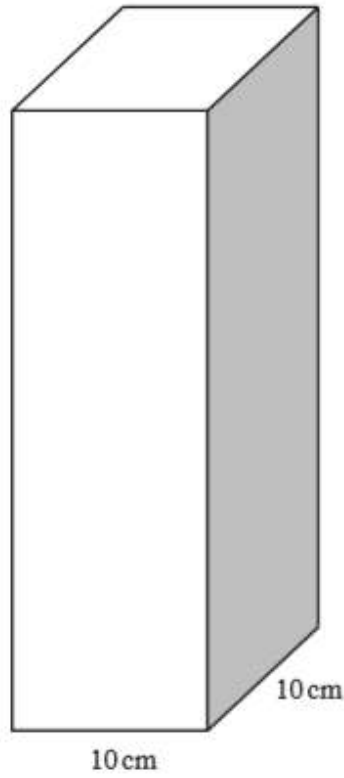
1. (a)



A rectangular container, full of water, measures 20 cm by 15 cm by 10 cm.
Calculate the volume of water in the container.

[2]

(b) All of the water is poured into a second container with a square base of side 10 cm.



Calculate the depth of the water in this container.

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[2]

2. The diagram shows a number of cubes of side 1 cm forming a solid shape.

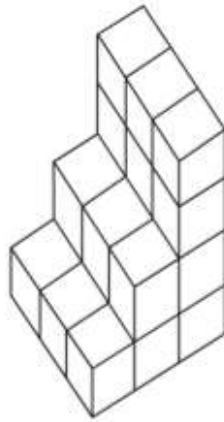


Diagram not drawn to scale

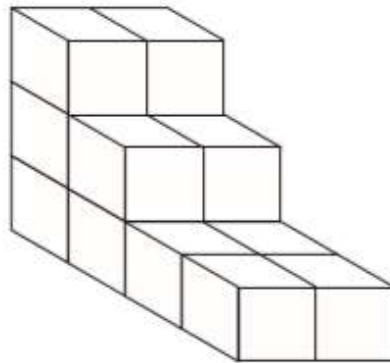
Find, by counting the cubes, the volume of the shape and state the units of your answer.

.....

Volume of the shape =

[2]

3. The diagram shows a number of cubes of side 1 cm forming a solid shape.



Find, by counting the cubes, the volume of the shape and state the units of your answer.

.....

Volume of the shape =

[2]

4.

A rectangular tank has a length of 20 cm, a width of 15 cm and a height of 10 cm. Water is poured into the tank until it is half full. Calculate the volume of the water in **litres**.

[4]

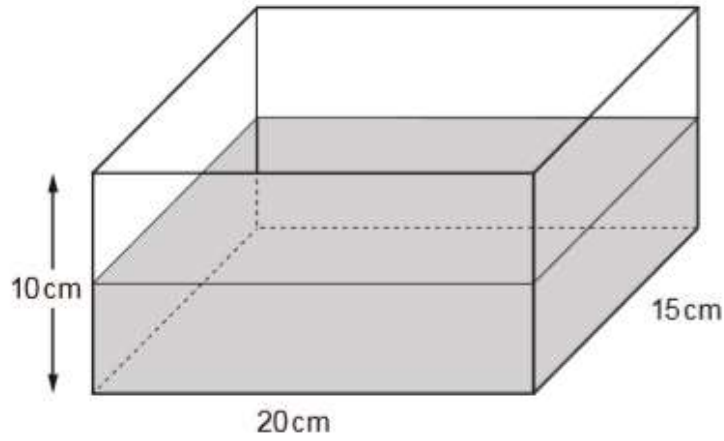
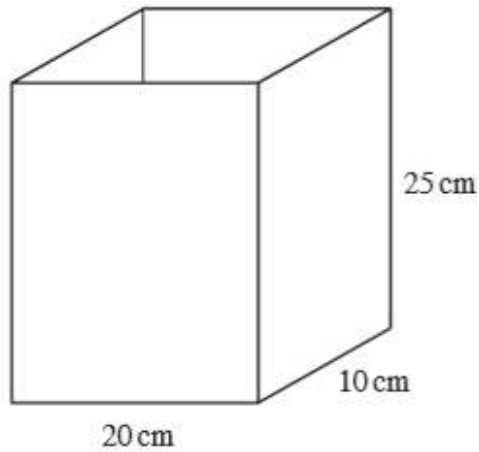


Diagram not drawn to scale

5.



- (a) A storage container, in the shape of a cuboid, measures 20 cm by 10 cm by 25 cm. Calculate the volume of the container, clearly indicating the units of your answer.

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.....

.....

.....

[3]

- (b) The container is used to store 4 litres of cooking oil. Calculate the distance of the surface of the cooking oil below the top of the container.

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[4]

6.

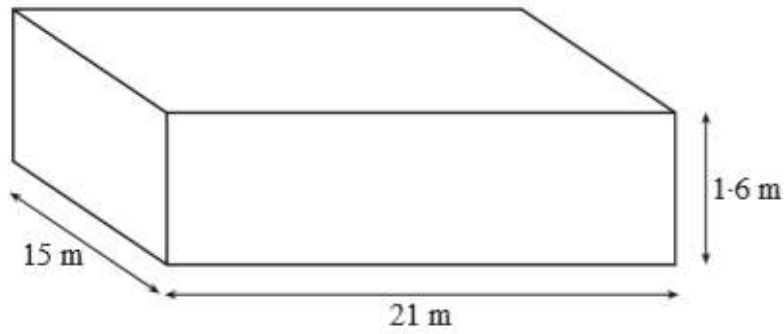


Diagram not drawn to scale.

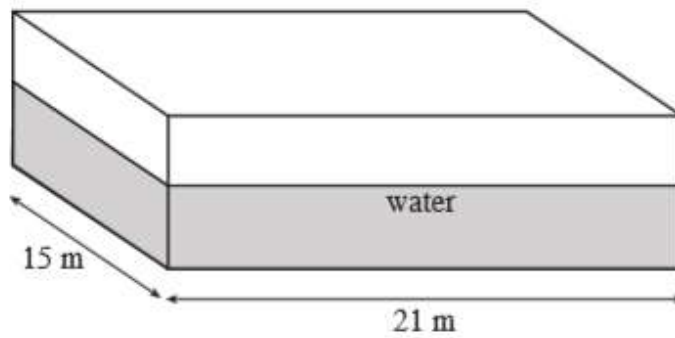
A swimming pool in the shape of a cuboid has a base measuring 21 m by 15 m and a depth of 1.6 m.

(a) Calculate the volume of the swimming pool.

.....

[2]

(b)



When the volume of the water in the swimming pool is 377 m^3 , calculate the depth of the water, giving your answer to an appropriate degree of accuracy.

.....

[2]

7.

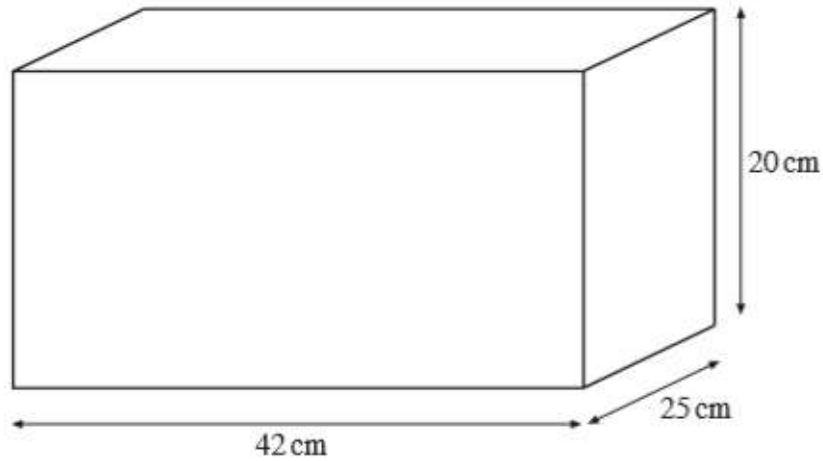


Diagram not drawn to scale.

A tank in the shape of a cuboid has a base measuring 42 cm by 25 cm and a height of 20 cm.

(a) Calculate the volume of the tank.

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.....

[2]

(b) Water is poured into the tank.
 The volume of the water is 8400 cm^3 .
 Calculate the depth of the water in the tank.

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[2]

8.

- (a) Two cubes, each with sides 3 cm, are stuck together by matching up two complete faces to form a cuboid.
Draw a sketch of the cuboid.

[2]

- (b) Find the volume of the cuboid.

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[2]

9.

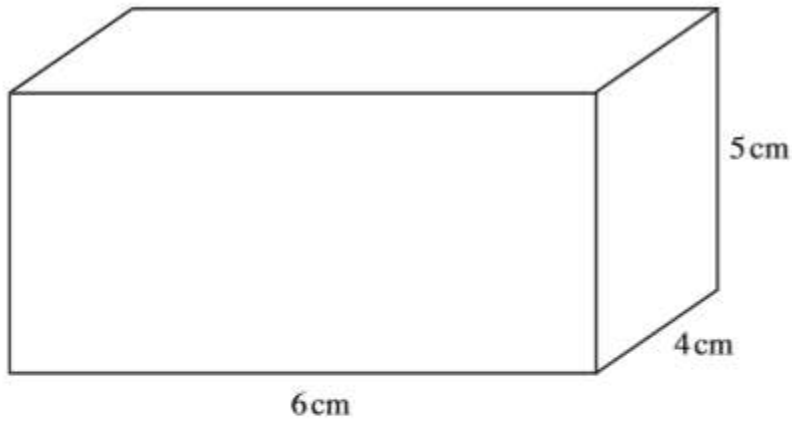


Diagram not drawn to scale.

Calculate the volume of the cuboid shown above, clearly stating the units of your answer.

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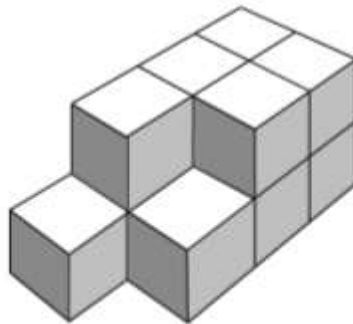
.....

.....

[3]

10. The following solid shape is made up of cubes with sides of 1 cm. What is the volume of the shape? Give the units of your answer. (There are no hidden gaps.)

[2]



.....

.....

Volume =

11.

(a) Calculate the volume of a metal cuboid measuring 12 cm by 7 cm by 11 cm.

[2]

(b) The above metal cuboid is melted down and made into a different cuboid, as shown below, with a base measuring 6 cm by 13 cm.

Calculate the height h cm, of this cuboid, correct to 1 decimal place.

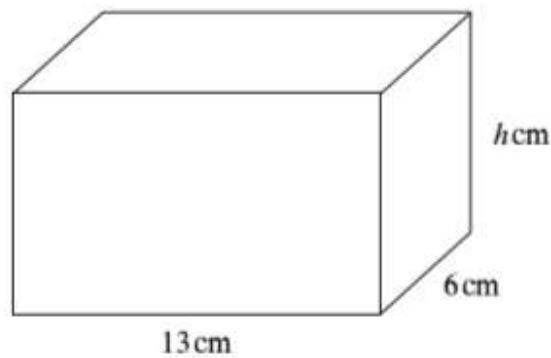


Diagram not drawn to scale

[2]