

Varied Fluency

Step 1: What is Volume?

National Curriculum Objectives:

Mathematics Year 5: (5M8) [Estimate volume \[for example, using 1 cm³ blocks to build cuboids \(including cubes\)\] and capacity \[for example, using water\]](#)

Differentiation:

Developing Questions to support measuring volume in cm³, up to 12cm³, using cubes/cuboids or liquid volumes where scales are in multiples of 10 or 100 and measurements fall on marked increments.

Expected Questions to support measuring volume in cm³, up to 24cm³, using cubes/cuboids or liquid volumes where scales are in multiples of 10 or 100 but not all increments are marked.

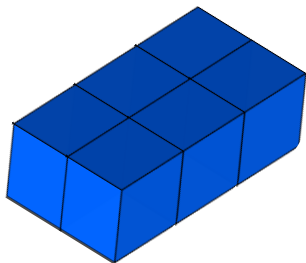
Greater Depth Questions to support measuring volume in cm³ up to 24cm³ using compound 3D shapes or liquid volumes where scales are in multiples of 10 or 100 but not all increments are marked and some measurements fall between increments.

More [Year 5 Volume](#) resources.

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What is Volume?

1a. Complete the stem sentences to show the volume of this cuboid.



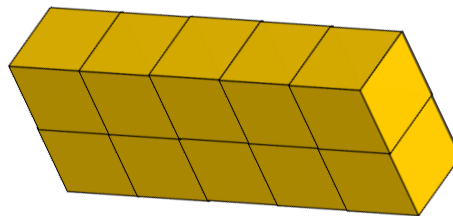
The cuboid is made up of _____ cm cubes.
The volume of the cuboid is _____ cm^3 .



VF

What is Volume?

1b. Complete the stem sentences to show the volume of this cuboid.



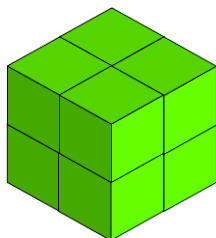
The cuboid is made up of _____ cm cubes.
The volume of the cuboid is _____ cm^3 .



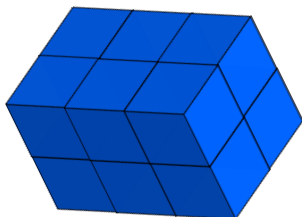
VF

2a. Count the cm cubes to work out the volume of the cuboids.

A.



B.



A = _____ cm^3

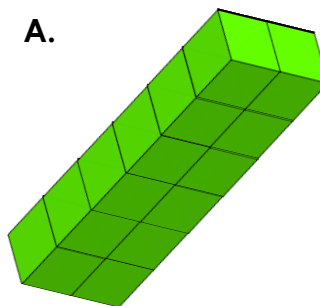
B = _____ cm^3



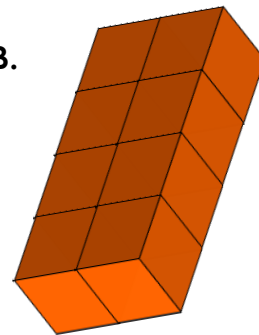
VF

2b. Count the cm cubes to work out the volume of the cuboids

A.



B.



A = _____ cm^3

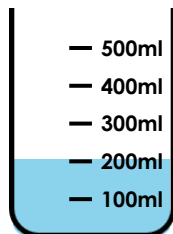
B = _____ cm^3



VF

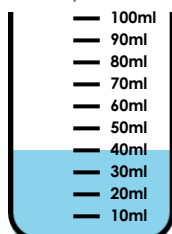
3a. Match the liquid in each container to the correct volume.

A.



40 cm^3

B.



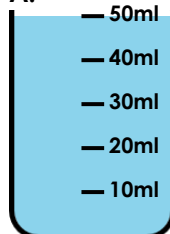
200 cm^3



VF

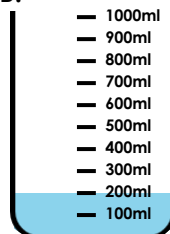
3b. Match the liquid in each container to the correct volume.

A.



200 cm^3

B.

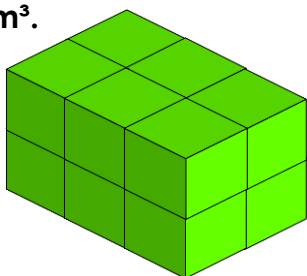


50 cm^3



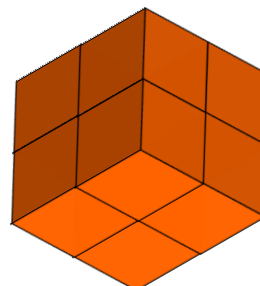
VF

4a. True or false? The volume of this cuboid is 16 cm^3 .



VF

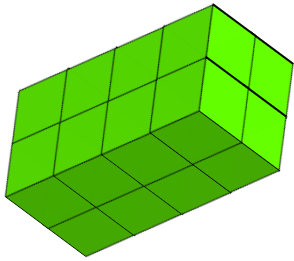
4b. True or false? The volume of this cuboid is 12 cm^3 .



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What is Volume?

5a. Complete the stem sentences to show the volume of this cuboid.



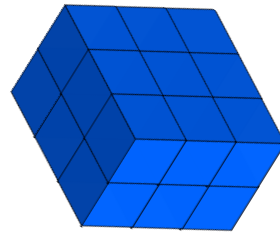
The cuboid is made up of _____ cm cubes.
The volume of the cuboid is _____ cm³.



VF

What is Volume?

5b. Complete the stem sentences to show the volume of this cuboid.

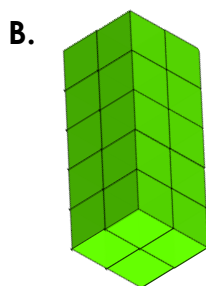
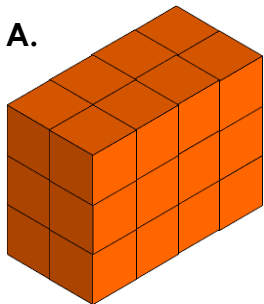


The cuboid is made up of _____ cm cubes.
The volume of the cuboid is _____ cm³.



VF

6a. Count the cm cubes to work out the volume of the cuboids.

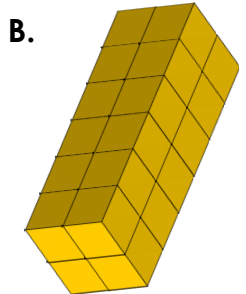
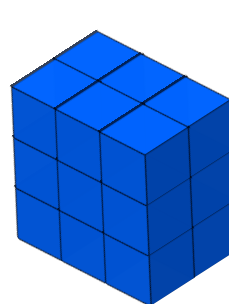


A = _____ cm³

B = _____ cm³

VF

6b. Count the cm cubes to work out the volume of the cuboids

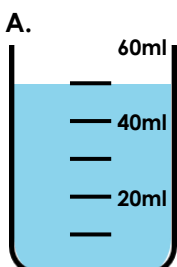


A = _____ cm³

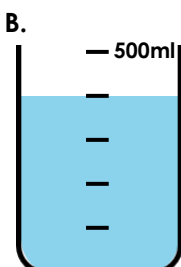
B = _____ cm³

VF

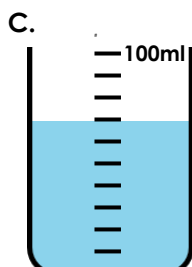
7a. Match the liquid in each container to the correct volume.



400cm³



70cm³

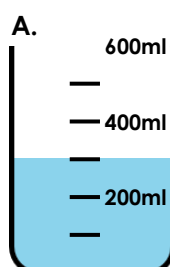


50cm³

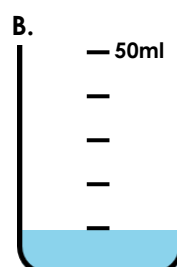


VF

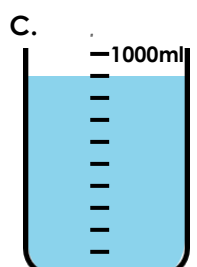
7b. Match the liquid in each container to the correct volume.



10cm³



900cm³

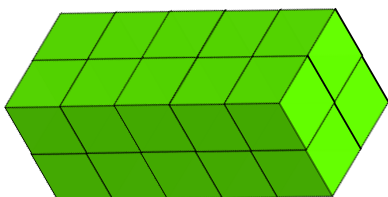


300cm³



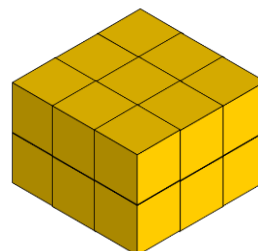
VF

8a. True or false? The volume of this cuboid is 24cm³.



VF

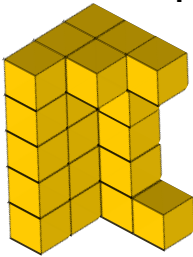
8b. True or false? The volume of this cuboid is 21cm³.



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What is Volume?

9a. Complete the stem sentences to show the volume of this 3D shape.



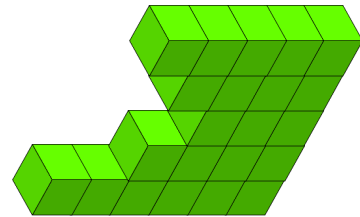
The shape is made up of _____ cm cubes.
The volume of the shape is _____ cm^3 .



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What is Volume?

9b. Complete the stem sentences to show the volume of this 3D shape.



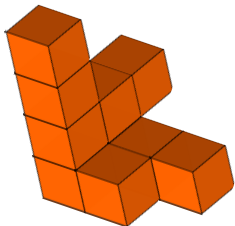
The shape is made up of _____ cm cubes.
The volume of the shape is _____ cm^3 .



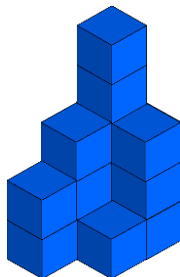
VF

10a. Count the cm cubes to work out the volume of the 3D shapes.

A.



B.



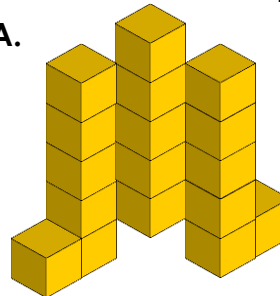
A = _____ cm^3

B = _____ cm^3

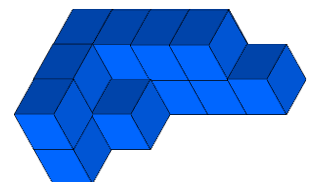
VF

10b. Count the cm cubes to work out the volume of the 3D shapes.

A.



B.



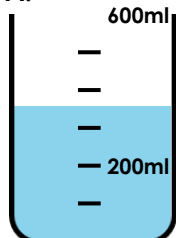
A = _____ cm^3

B = _____ cm^3

VF

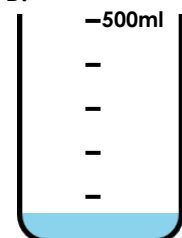
11a. Match the liquid in each container to the correct volume.

A.



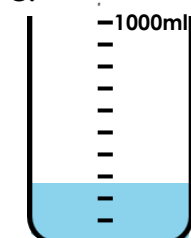
50 cm^3

B.



250 cm^3

C.



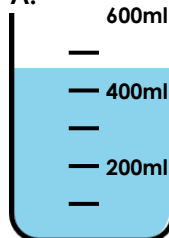
350 cm^3



VF

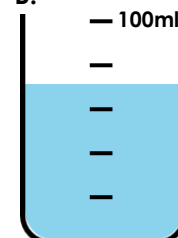
11b. Match the liquid in each container to the correct volume.

A.



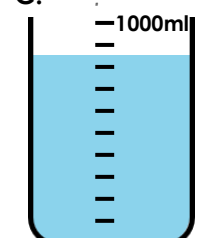
70 cm^3

B.



850 cm^3

C.

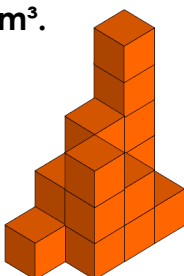


450 cm^3



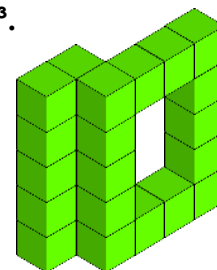
VF

12a. True or false? The volume of this 3D shape is 13 cm^3 .



VF

12b. True or false? The volume of this 3D shape is 21 cm^3 .



VF

Varied Fluency What is Volume?

Developing

- 1a. The cuboid is made out of 6 cm cubes.
The volume of the cuboid is 6cm³
2a. A = 8cm³; B = 12cm³
3a. A. 200cm³; B. 40cm³
4a. False. It is 12cm³

Expected

- 5a. The cuboid is made out of 16 cm cubes. The volume of the cuboid is 16 cm³.
6a. A = 24cm³; B = 20cm³.
7a. A. 50cm³; B. 400cm³; C. 70cm³.
8a. False. It is 20cm³

Greater Depth

- 9a. The shape is made out of 23 cm cubes.
The volume of the shape is 23 cm³
10a. A = 10cm³; B = 14cm³.
11a. A. 350cm³; B. 50cm³; C. 250cm³.
12a. False. It is 17cm³

Varied Fluency What is Volume?

Developing

- 1b. The cuboid is made out of 10 cm cubes. The volume of the cuboid is 10 cm³
2b. A = 12cm³; B = 8cm³
3b. A. 50cm³; B. 200cm³
4b. False. It is 8cm³

Expected

- 5b. The cuboid is made out of 18 cm cubes. The volume of the cuboid is 18 cm³.
6b. A = 18cm³; B = 24cm³.
7b. A. 300cm³; B. 10cm³; C. 900cm³.
8b. False. It is 18cm³

Greater Depth

- 9b. The shape is made out of 22 cm cubes.
The volume of the shape is 22 cm³
10b. A = 18cm³; B = 14cm³.
11b. A. 450cm³; B. 70cm³; C. 850cm³.
12b. False. It is 24cm³