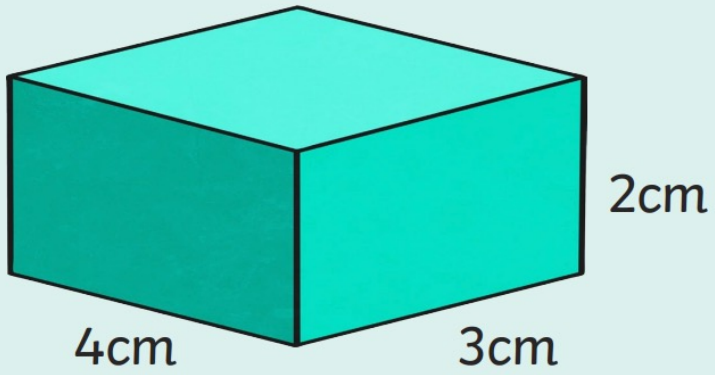
Volume

3D shapes have volume.

length × height × depth = volume



4cm × 2cm × 3cm = 24cm³

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When measuring the volume of a shape we have 3 measurements to consider.
This is how we have the name cubic centimetres cm^3
This is how we can call 3D shapes 3 dimensional, because they have 3 dimensions.

This is different to area, where we only have 2 measurements.

Which volume is the correct measurement?

20 cubic units

16 cubic units

15 cubic units

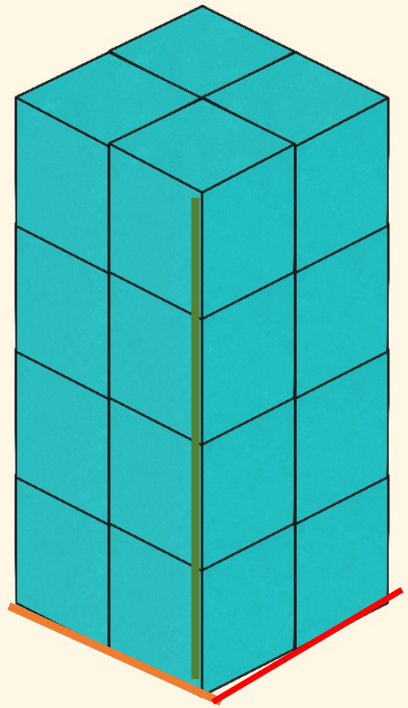
2x2x4

To make the counting process more efficient, we can create a number sentence like the one above. We take the 3 measurements (in any order) and times them together to find the total.

2-the number of cubes length ways (length)

2- the number of cubes deep (depth)

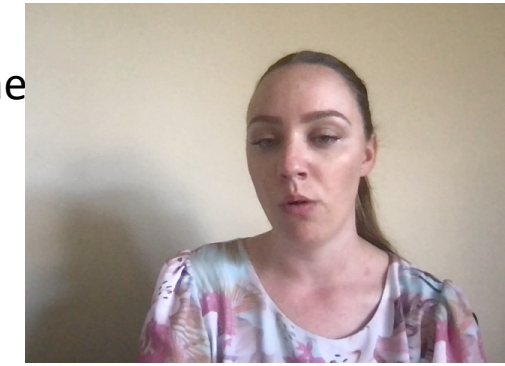
4- the number of cubes standing high (height)



When we are finding the volume of a 3d shape, we are looking for the total amount of space that object takes up.

When we have objects that are made up of cubes, we can simply count the total number of cubes to find the volume.

Can you find the volume?



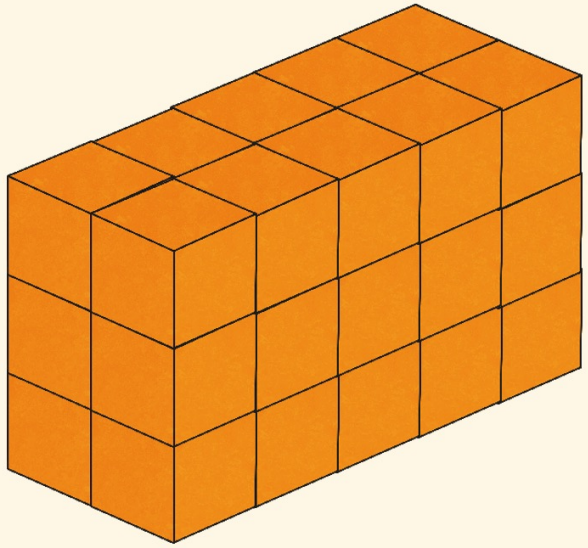
Which volume is the correct measurement?

3x2x5

6 cubic units

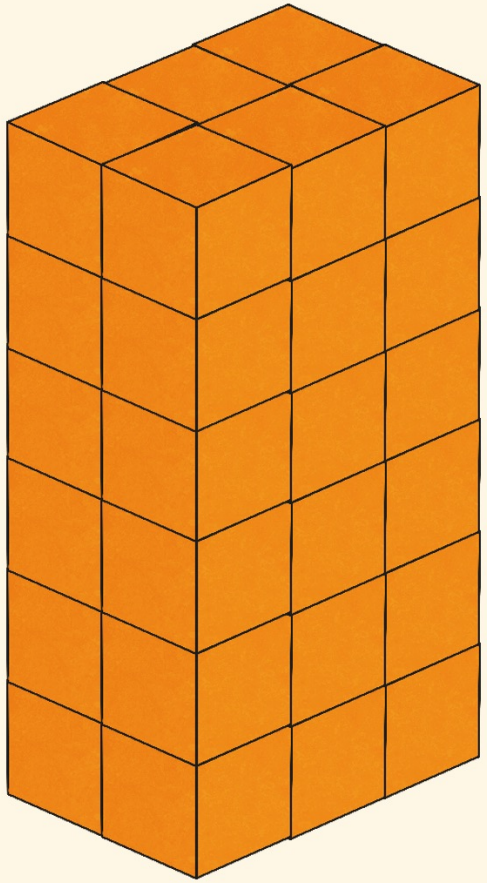
29 cubic units

30 cubic units



Which volume is the correct measurement?

2 x x



12 cubic units

36 cubic units

18 cubic units

Can you complete the number sentence and find the volume?