DR BAKER'S YEAR 5 MATHS
WEDNESDAY 1ST APRIL

WELCOME

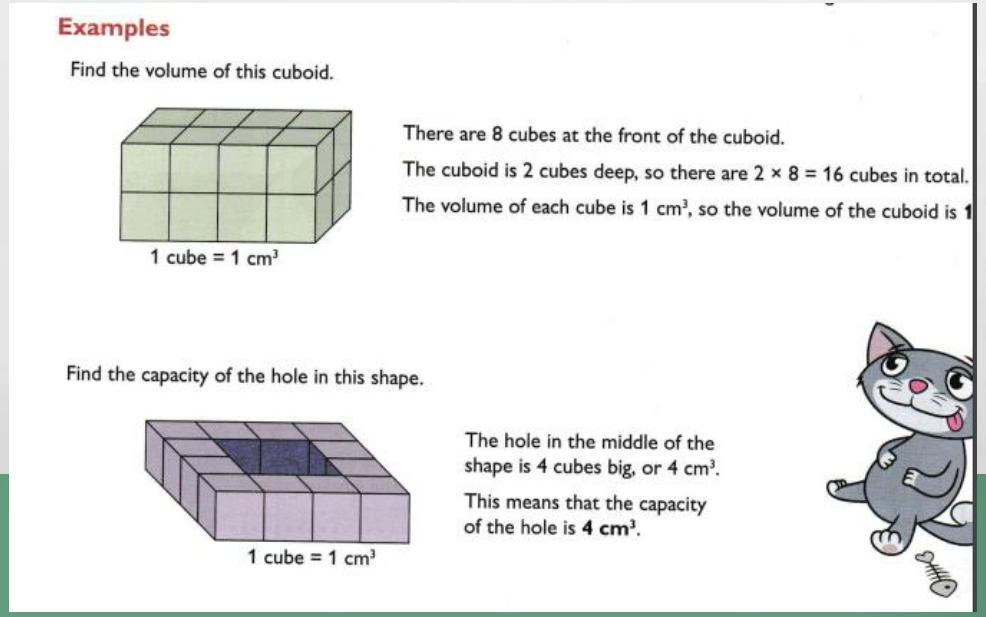
“Morning. Here are the answers to the times tables questions.

1. 6 x 5 = 30
2. 9 x 10 = 90
3. 7 x 4 = 28
4. 2 x 11 = 22
5. 9 x 3 = 27
6. 2 x 8 = 16
7. 5 x 8 = 40
8. 10 x 6 = 60
9. 4 x3 = 12
10. 11 x 7 = 77
11. 3 x 8 = 24
12. 8 x 4 = 32
13. 7 x 8 = 56
14. 6 x 4 = 24
15. 9 x 7 = 63
16. 12 x 6 = 72
17. 11 x 9 = 99
18. 7 x 0 = 0

TASKS FOR TODAY

L.O. To find the volume of 3D shapes.

Volume is the amount of space a 3D shape takes up. We measure it in cubic centimetres which we write as cm^3. There are formulas for calculating volumes but today we are going to do it by counting cubes. Have a look at these examples and then do either A and B or B and C. Look carefully on C!



Examples

Find the volume of this cuboid.

1 cube = 1 cm³

There are 8 cubes at the front of the cuboid.

The cuboid is 2 cubes deep, so there are 2 × 8 = 16 cubes in total.

The volume of each cube is 1 cm³, so the volume of the cuboid is 1

Find the capacity of the hole in this shape.

1 cube = 1 cm³

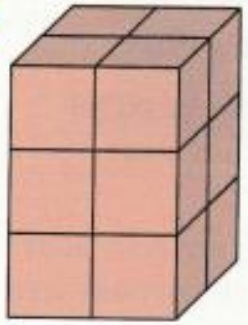
The hole in the middle of the shape is 4 cubes big, or 4 cm³.

This means that the capacity of the hole is **4 cm³**.

Set A

Each cube in these 3D shapes has a volume of 1 cm^3.
Work out the volume of these shapes:

1



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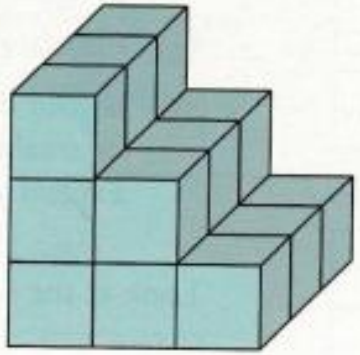

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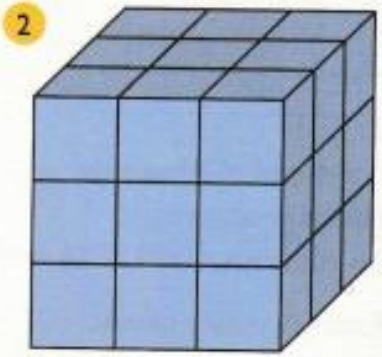

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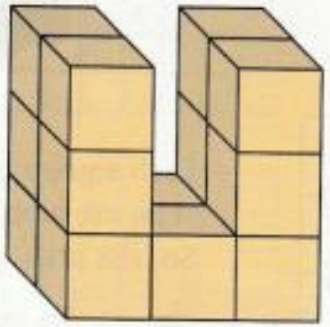
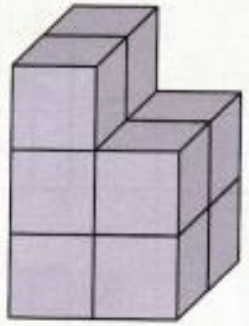


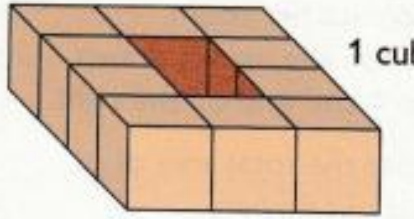
5 Look at the shape below.



1 cube = 1 cm

How many cubes would you need to add to make the shape have a volume of 14 cm^3?

6 What is the capacity of the hole in this shape?

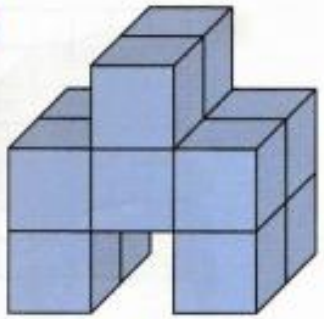


1 cube = 1 c

Set B

Each cube in these 3D shapes has a volume of 1 cm^3.
Work out the volume of these shapes:

1



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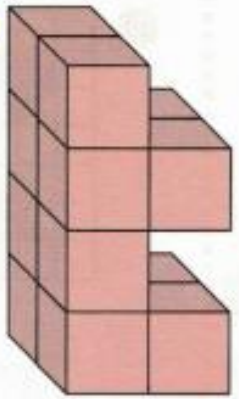

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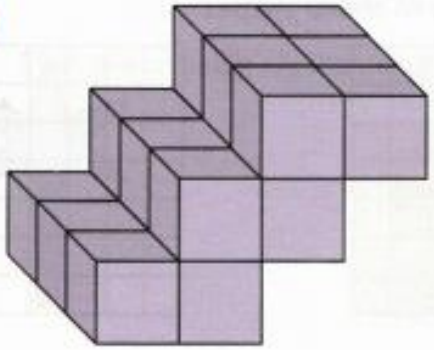

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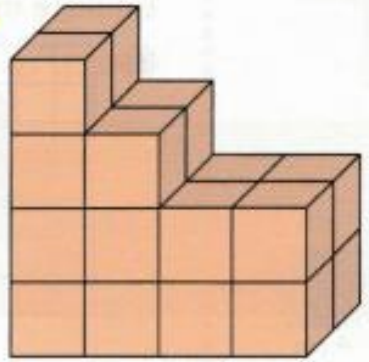
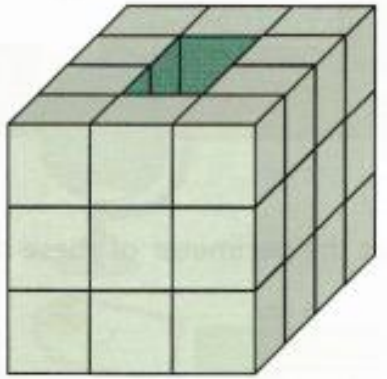


Bonnie builds this shape out of centimetre cubes.
Each layer is identical.



5 What is the capacity of the hole in the shape?

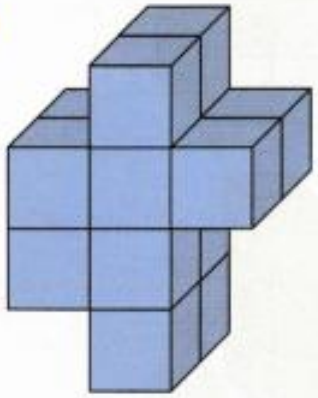
Bonnie builds another shape using identical layers to the shape above, but it is 7 cm tall.

6 Work out the capacity of the hole in the bigger shape.

Set C

Each cube in these 3D shapes has a volume of 1 cm^3.
Work out the volume of these shapes:

1



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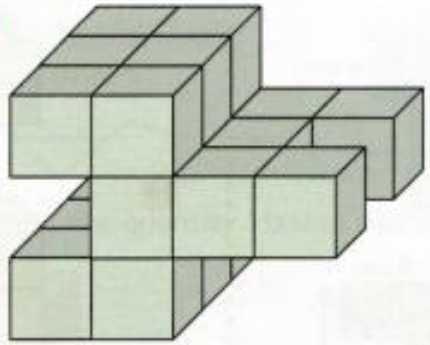

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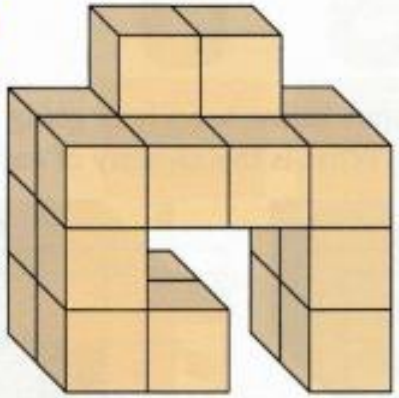

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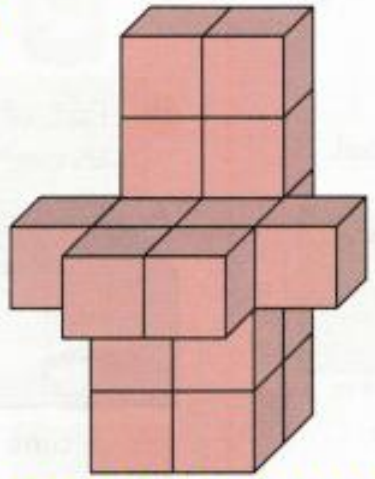
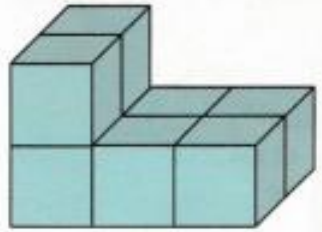


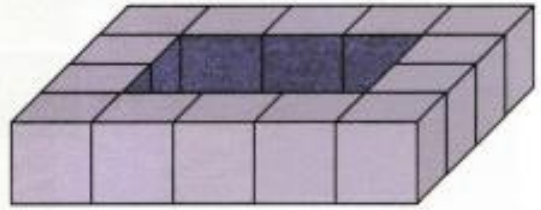
5 Sanjay builds this shape out of centimetre cubes.



He makes an identical shape and joins the two shapes to make a bridge.

What is the bridge's volume?

6 The shape shown below is made of centimetre cubes.
Kim stacks up three of this shape.



What is the capacity of the hole in Kim's stack?

ANSWERS

Set A

1. $12cm^3$
2. $27cm^3$
3. $18cm^3$
4. $14cm^3$
5. 4
6. $2cm^3$

Set B

1. $12cm^3$
2. $18cm^3$
3. $12cm^3$
4. $22cm^3$
5. $6cm^3$
6. $14cm^3$

Set B

1. $14cm^3$
2. $20cm^3$
3. $20cm^3$
4. $20cm^3$
5. $16cm^3$
6. $18cm^3$