3D Shapes - Questions

Key Stage 2: 2005 Paper B

1.

7 This table shows information about four solid shapes.

Complete the table.

One has been done for you.

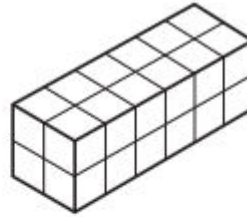|	number of **flat** surfaces	number of **curved** surfaces
sphere	0	1
cone		
cuboid		
cylinder		

7i

7ii

2 marks

Key Stage 2: 2012 Paper A L6

1.

10 Cleo has **24** centimetre cubes.

She uses all 24 cubes to make a cuboid
with dimensions **6**cm, **2**cm and **2**cm.

Write the dimensions of a **different** cuboid she can make using all 24 cubes.

_____ cm, _____ cm and _____ cm   (1 mark)

Jon has **20** centimetre cubes.

He wants to make a **cube** with edges that are **3**cm long.
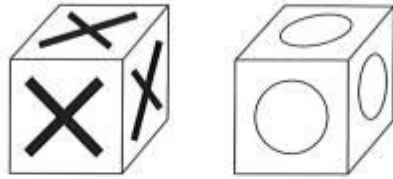
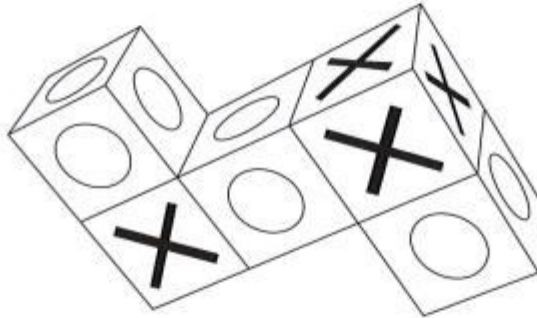How many **more** centimetre cubes does he need?

more   (1 mark)

1.

20 Seb has some cubes with a cross on each face and some cubes with a circle on each face.

He sticks five cubes together to make this shape.

How many crosses and how many circles are there on the **outside** of the shape?

Number of crosses [ ]

20a

1 mark

Number of circles [ ]

20b

1 mark

Key Stage 2: 2012 Paper B

1.

14 Mina thinks of a 3-D shape.

She says,

*'It has 5 faces.
Two opposite faces are triangles.
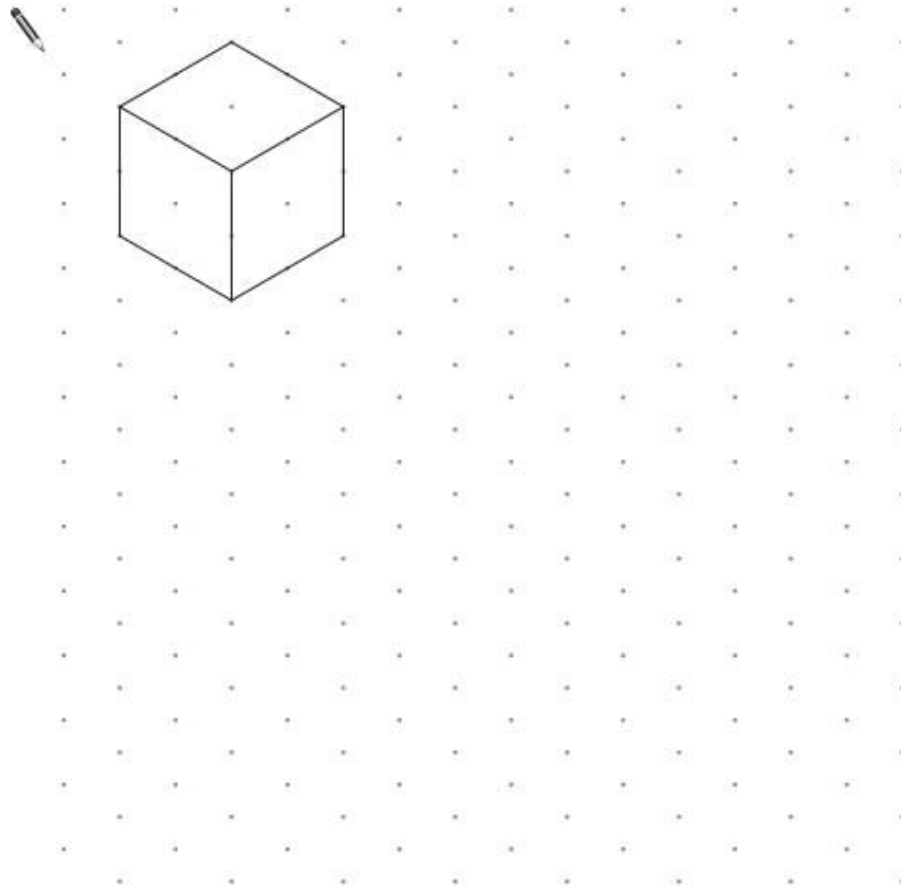The other faces are rectangles.'*

What is the name of the 3-D shape?

_____

14

1 mark

1.

13 Here is a drawing of a cube on an isometric grid.

Draw a cuboid that has:

- the **same** volume

- **half** the height.

2 marks

1.

9 Jack has two **square-based pyramids** that are the same size.

He sticks the square faces together to make a new 3-D shape.

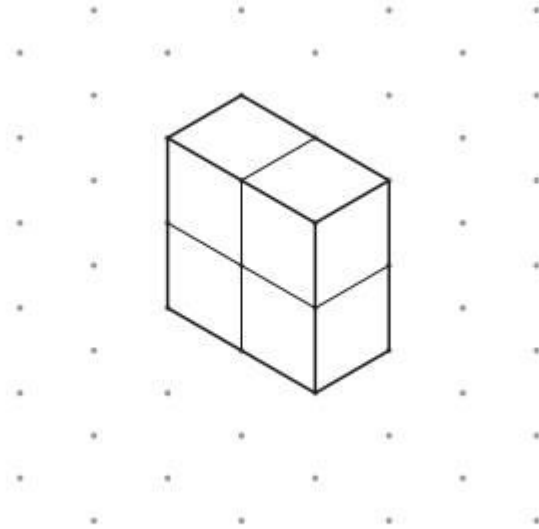How many **faces** and how many **edges** does
his new 3-D shape have?

| faces | and | edges |

1 mark

1.

8 Megan uses four cubes to make this cuboid.

Then she takes one cube away, leaving the other cubes where they are.

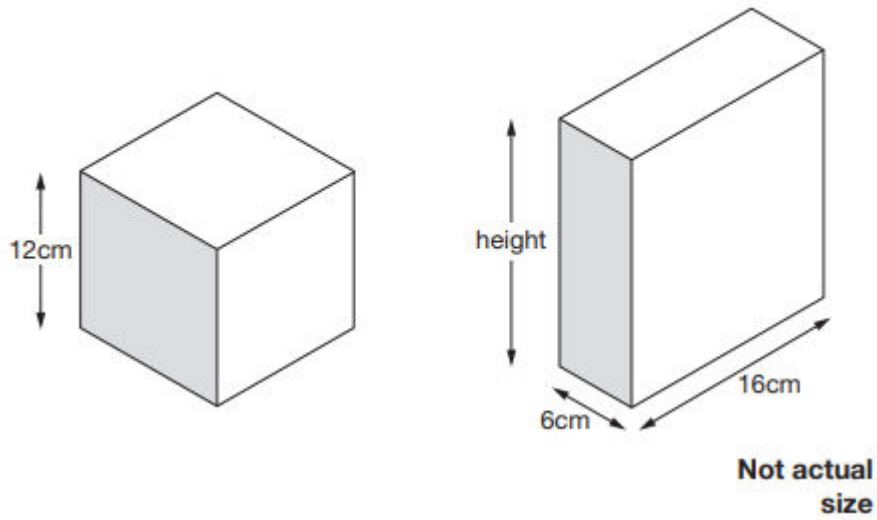Draw what the new shape could be.

1 mark

Key Stage 2: 2015 Paper B L6

1.

6 The cube and cuboid have **equal volumes**.

12cm

height

6cm   16cm

Not actual size

Calculate the height of the cuboid.

Show your method

cm

2 marks

1.

22 This shape is made of wooden centimetre cubes.

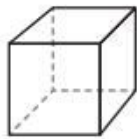
3cm

5cm

5cm

Not actual size
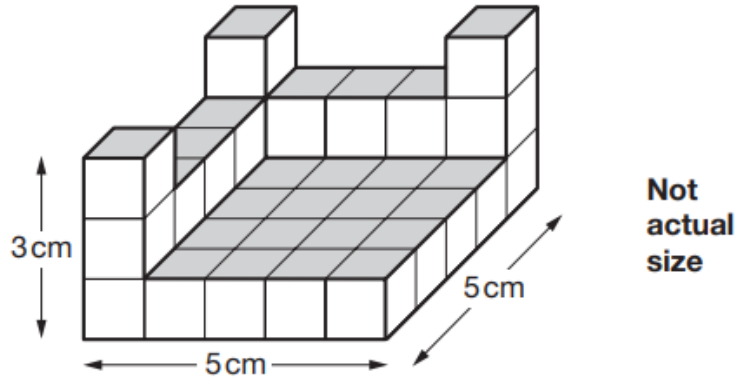
How many **more** centimetre cubes are needed to make it into a solid cuboid 3cm tall, 5cm long and 5cm wide?
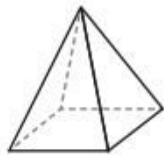
22

1 mark

1.

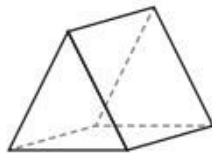**12** Here are diagrams of some 3-D shapes.

Tick each shape that has the same number of faces as vertices.
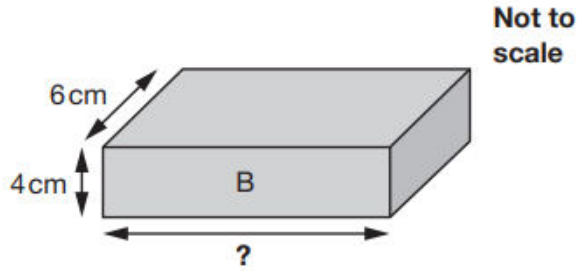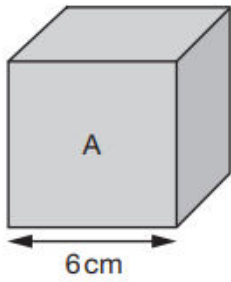
Cube ☐

Square-based pyramid ☐

Triangular prism ☐

Triangular-based pyramid ☐

2 marks

1.

24 Cube A and cuboid B have the same volume.

Not to scale

A

6 cm

6 cm

B

4 cm

?

Calculate the missing length on cuboid B.

Show your method

cm

2 marks

Key Stage 2: 2018 Paper 2 Reasoning

1.

11 Here is a drawing of a 3-D shape.
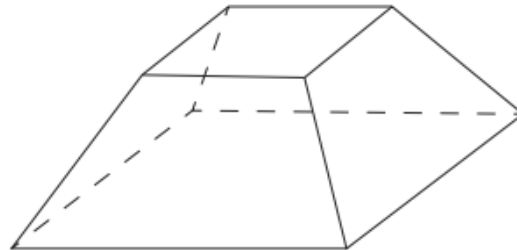
Complete the table.

Number of faces	Number of vertices	Number of edges

2 marks

1.

23 Amina made this cuboid using centimetre cubes.

Not actual size

4 cm

3 cm

6 cm
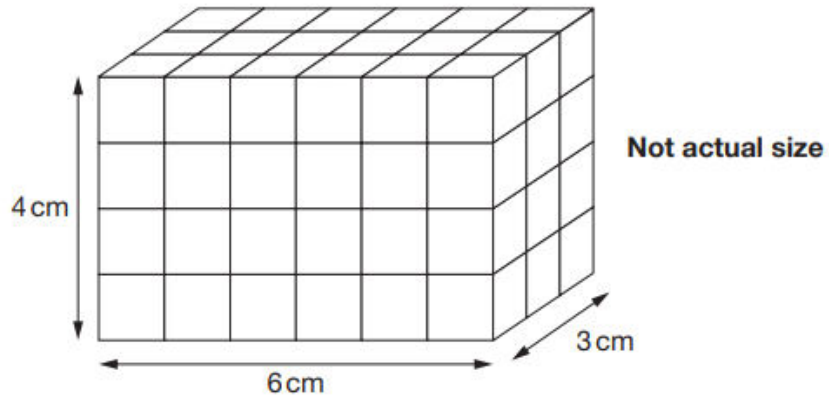
Stefan makes a cuboid that is 5 cm longer, 5 cm taller and 5 cm wider than Amina's cuboid.

What is the **difference** between the number of cubes in Amina's and Stefan's cuboids?

Show your method

cubes

2 marks