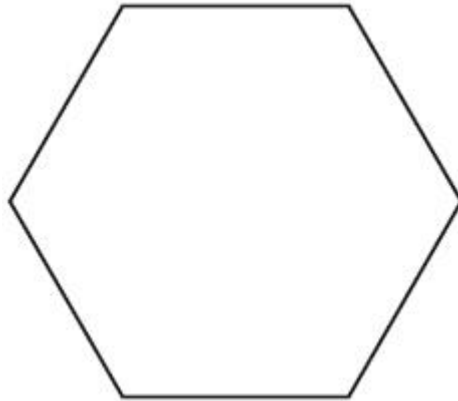


Year 6 2D and 3D shapes

Q1. Here is a hexagon.

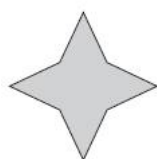
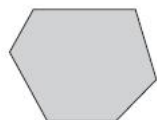
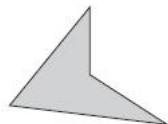
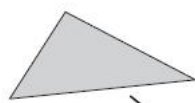
Draw **two** straight lines across the hexagon to make two triangles and two quadrilaterals.



1 mark

Q2. Match each shape to the correct name.

One has been done for you.



pentagon

triangle

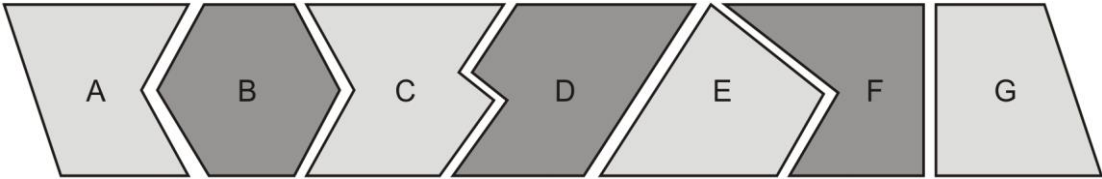
octagon

quadrilateral

hexagon

2 marks

Q3. Here are seven shapes.

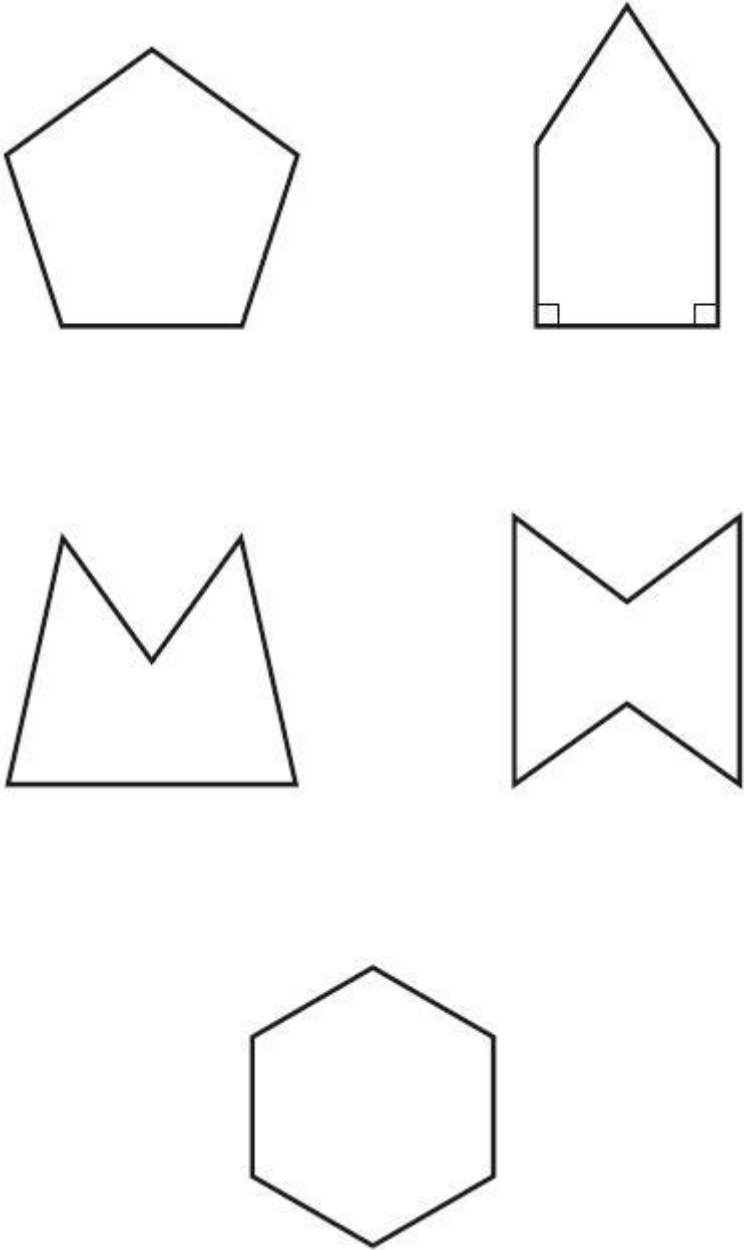


Write the letters of the two shapes which are **pentagons**.

and

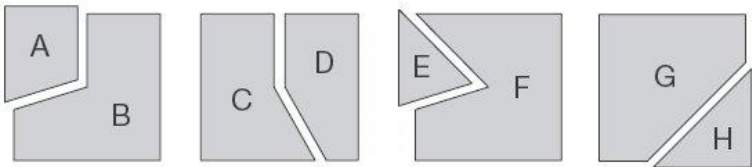
1 mark

Q4. Circle the **pentagon** with exactly **four acute angles**.



1 mark

Q5. Each of these four squares has been cut into two new shapes.



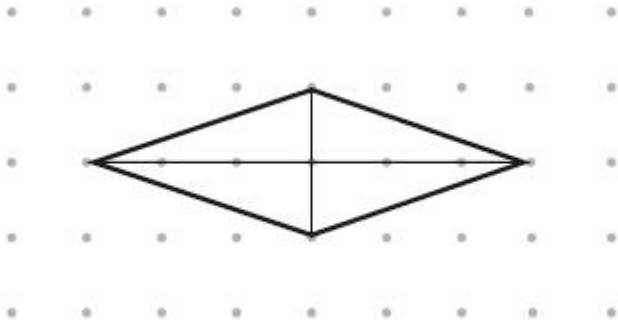
Write the letters of all the new shapes that are **hexagons**.

1 mark

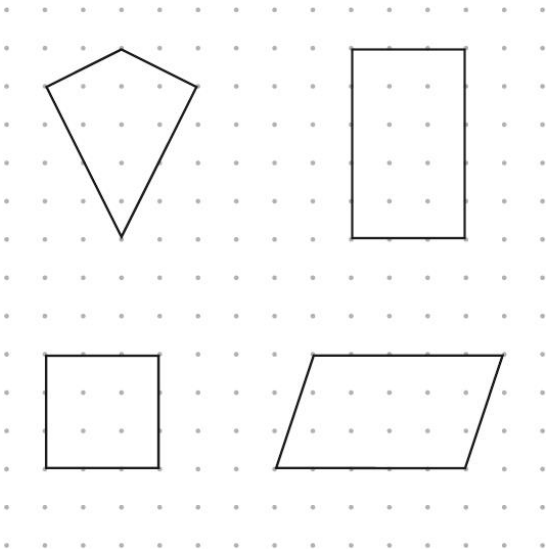
Write the letters of all the new shapes that are **pentagons**.

1 mark

Q6. The diagonals of this quadrilateral cross at right angles.



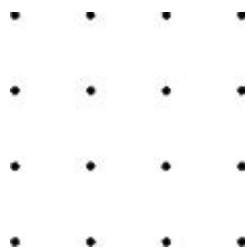
Tick **all** the quadrilaterals that have diagonals which cross at right angles.



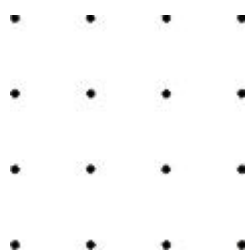
2 marks

Q7.

Join the dots to make a pentagon with only one right angle.



Now join the dots to make a pentagon with exactly two right angles.



2 marks

Q8.

Here are four statements.

For each statement put a tick (✓) if it is **possible**.

Put a cross (X) if it is **impossible**.

A triangle can have 2 acute angles.

☐

A triangle can have 2 obtuse angles.

☐

A triangle can have 2 parallel sides.

☐

A triangle can have 2 perpendicular sides.

☐

2 marks

Q9.



Sarah draws a quadrilateral.

It has these properties:

- it has 2 long sides the same length;
- it has 2 short sides the same length;
- it does NOT have any right angles;
- it does NOT have reflective symmetry.

Write the **mathematical** name for Sarah's quadrilateral.

_____ 1 marks

Q10.

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?

_____ 1 mark

Q11. This table shows information about four solid shapes.

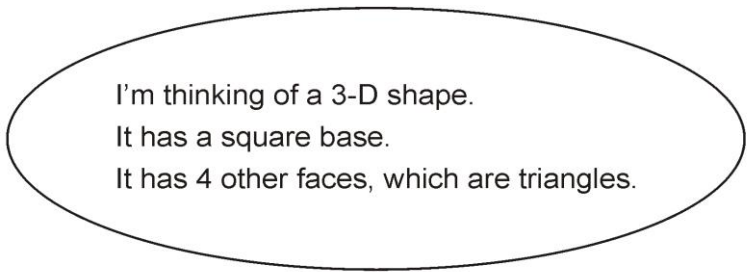
Complete the table.

One has been done for you.

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

2 marks

Q12.



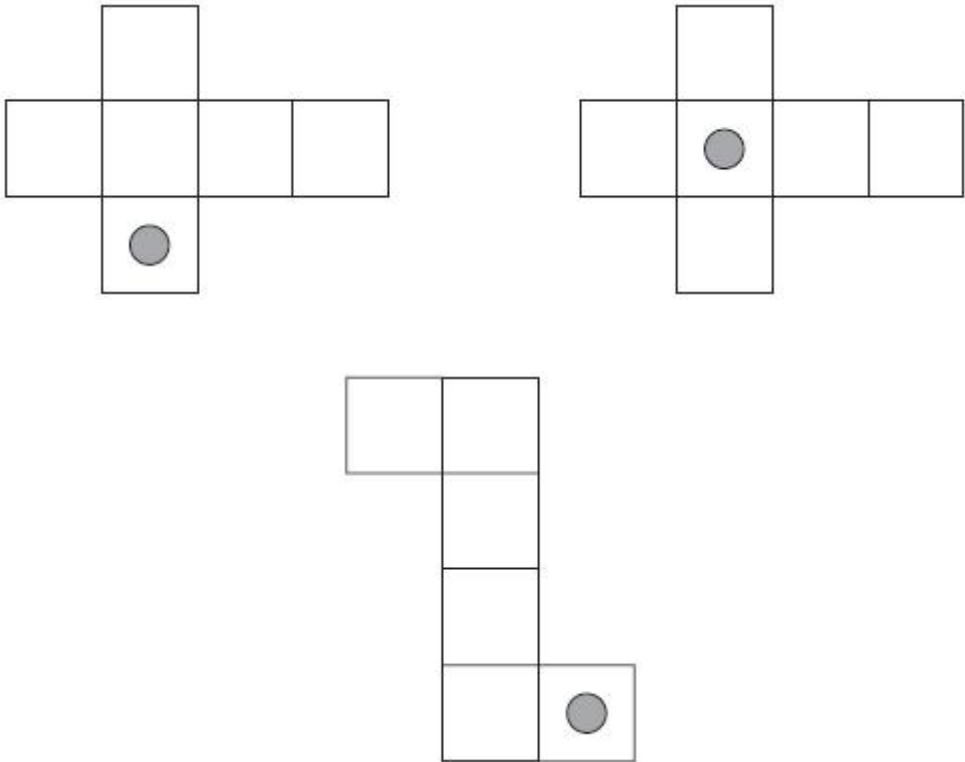
What is the name of the 3-D shape?



1 mark

Q13. Here are three nets of a cube.

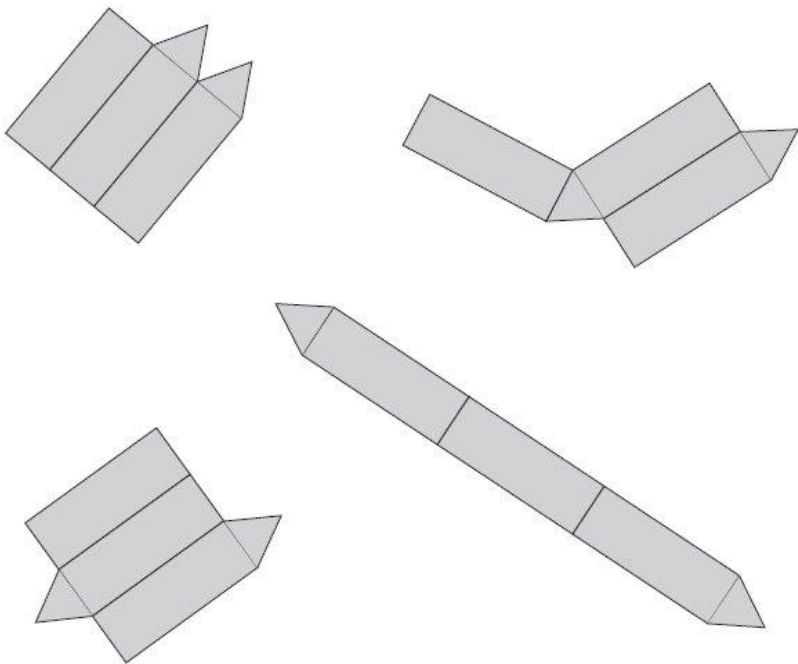
On each net draw **one more dot** so that each cube will have dots on **opposite** faces.



2 marks

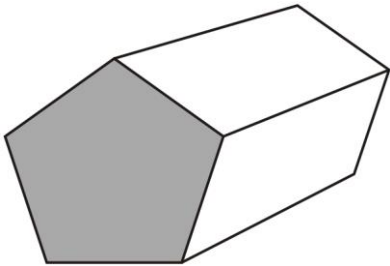
Q14. Two of these diagrams are nets for a triangular prism.

Put a tick (✓) in them.

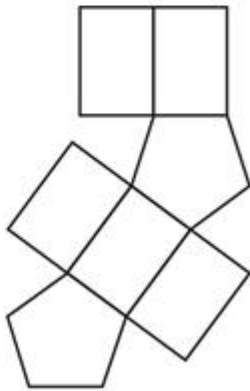
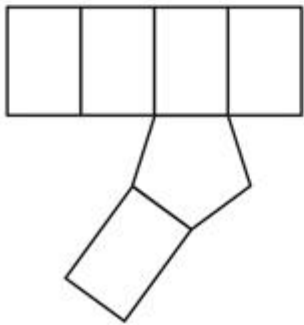
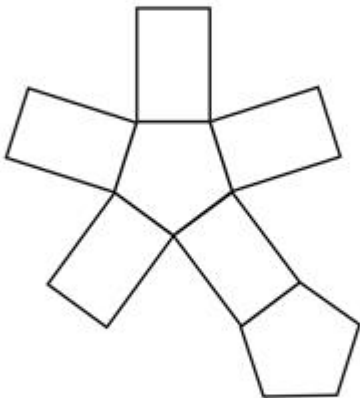
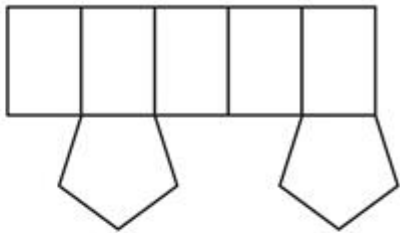
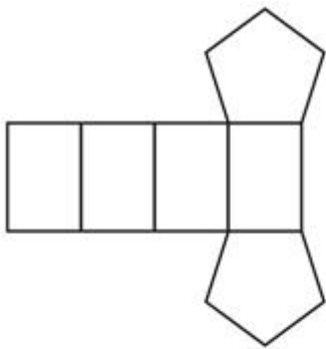


1 mark

Q15. This is a drawing of a pentagonal prism.



Tick (✓) the one shape that is a net for the pentagonal prism.



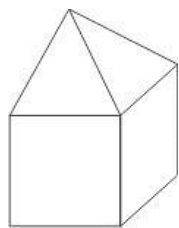
Q16. Complete the table.

Shape	Number of		
	Faces	Vertices	Edges
Cuboid	6		
Triangular Prism		6	
Square-based pyramid			8

2 marks

Q17.

Ben fits a square-based pyramid exactly on top of a cube.



Write in the missing numbers to describe Ben’s new shape.

Ben’s new shape has faces

vertices and edges.

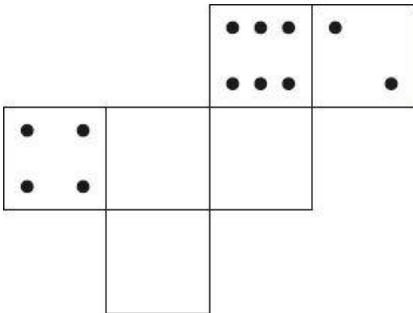
2 marks

Q18.

On a dice, the sum of the dots on opposite faces is always 7



Draw dots on the three empty faces of the net so that it could fold up to make a dice.



Q19. 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

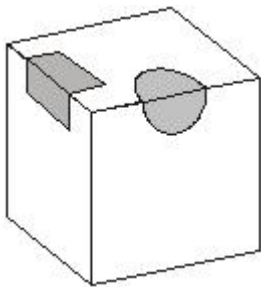
and

edges

1 mark

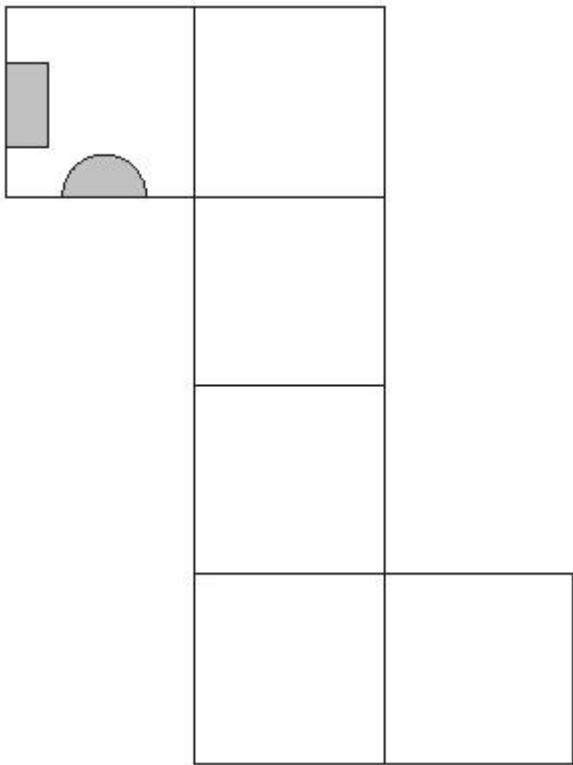
Q20.

A cube has shaded shapes on three of its faces.



Here is a net of the cube.

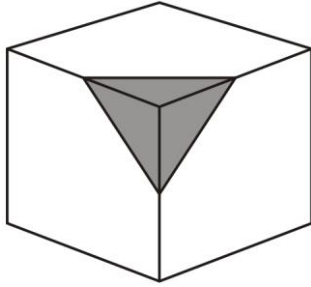
Draw in the two missing shaded shapes.



1 mark

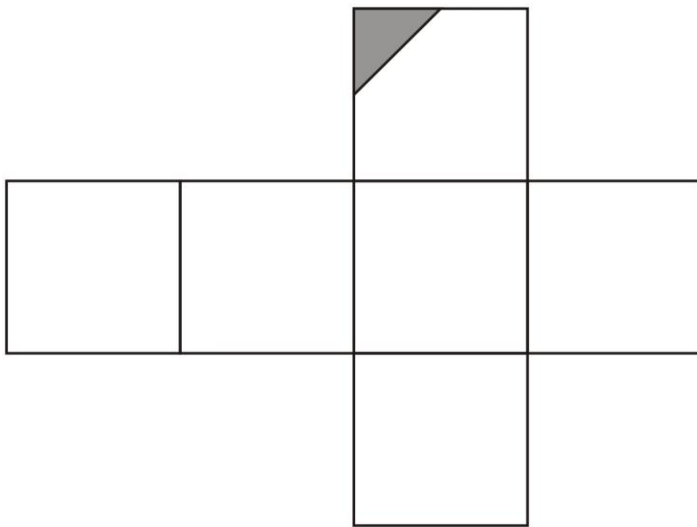
Q21.

A cube has shaded triangles on three of its faces.



Here is the net of the cube.

Draw in the two missing shaded triangles.



1 mark