



Problem solving

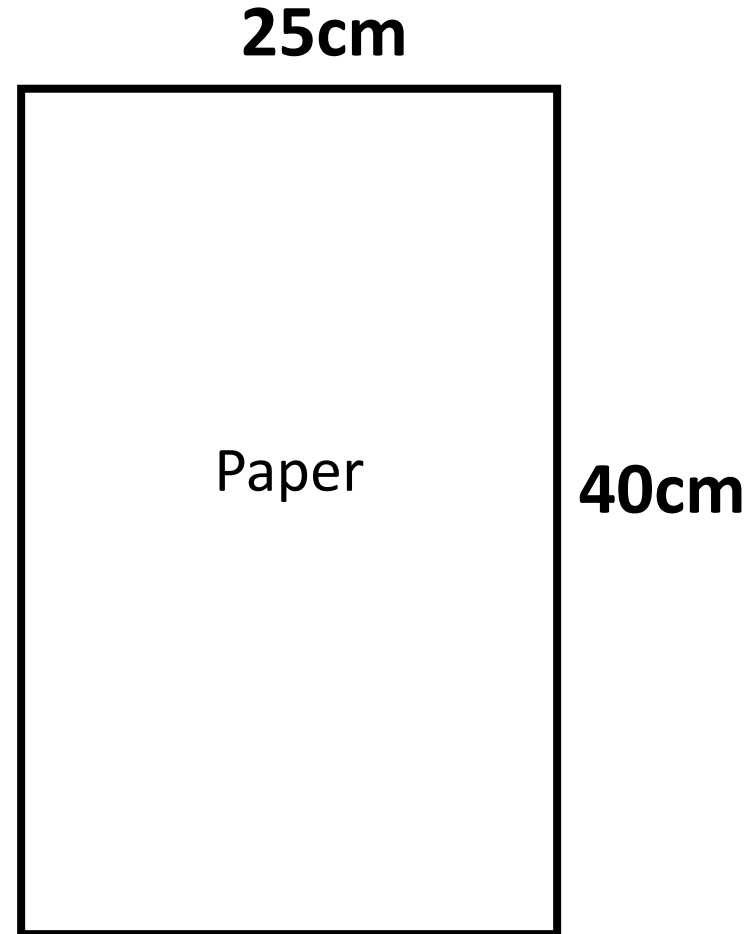
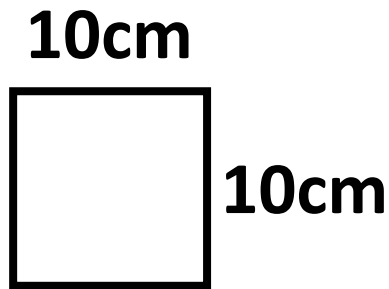
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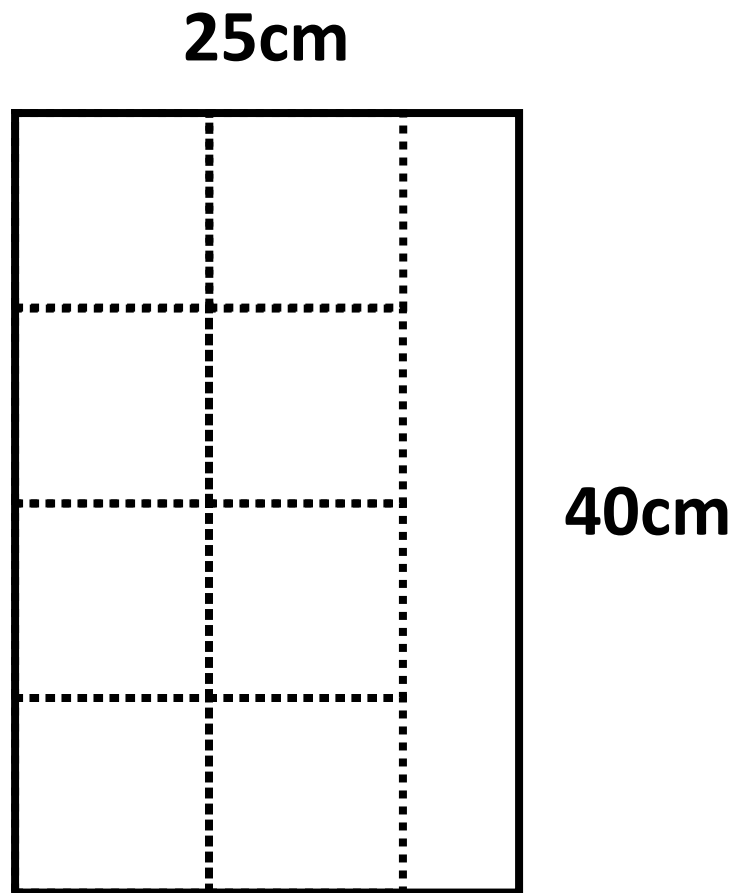
I have a piece of paper measuring **25cm x 40cm**.

I am going to cut the paper into small squares measuring **10cm x 10cm**.



How many squares can I make?





8 square pieces of paper.

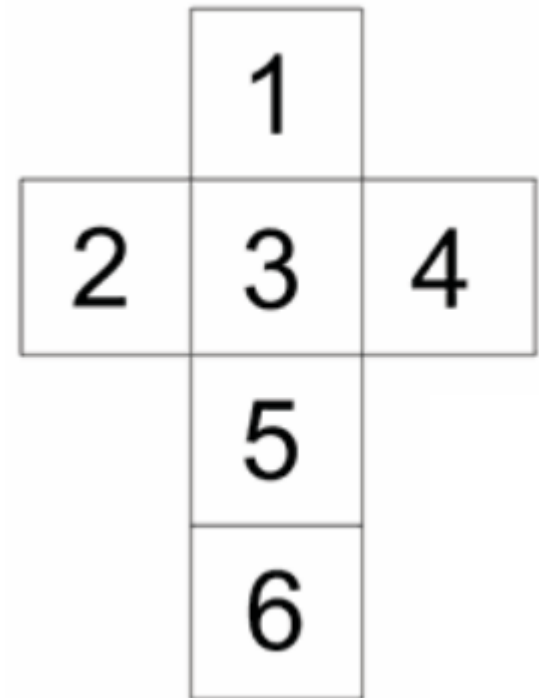


Net: A 2D representation of the faces of a 3D shape.

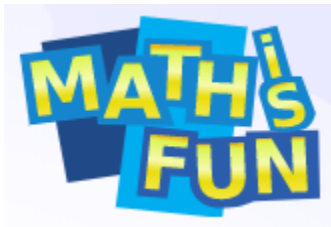
Cube



Net of a cube



These websites might help you understand.



Load website

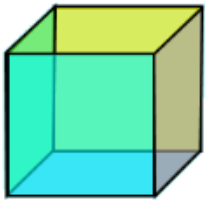


Load website

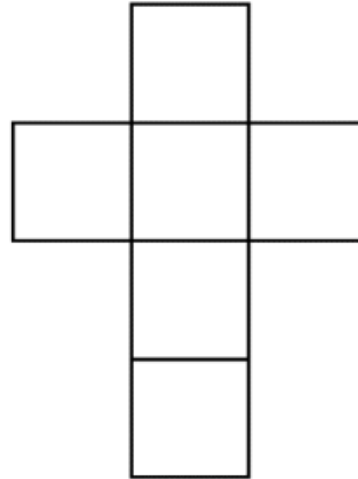
Examples

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Cube



Cube Net

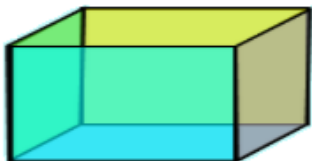


Faces: 6

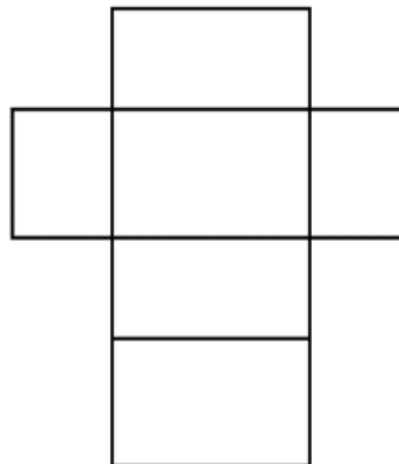
Edges: 12

Vertices: 8

Cuboid



Cuboid Net



Faces: 6

Edges: 12

Vertices: 8

Test your understanding

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For the following shapes,

- Draw a rough sketch of the 3D shape
- Draw a rough sketch of the net
- State the number of vertices, edges and face

1 Cone

2 Cylinder

3 Triangular prism

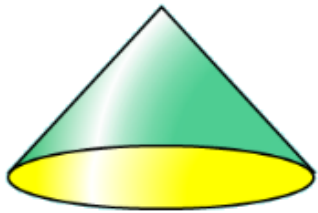
4 Octahedron

5 Tetrahedron

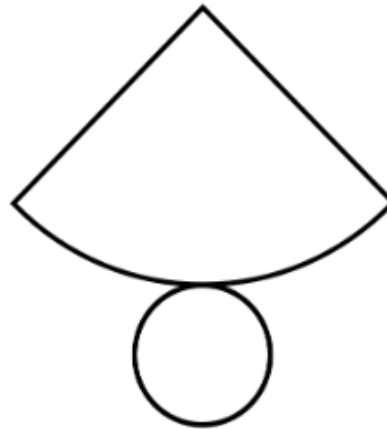
6 Square based pyramid

1

Cone



Cone Net



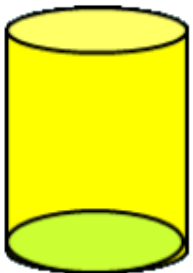
Faces: 2

Edges: 1

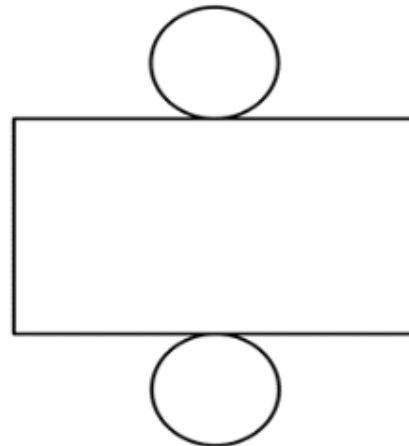
Vertices: 0 or 1

2

Cylinder



Cylinder Net



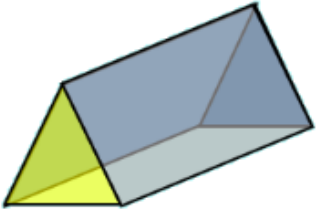
Faces: 2

Edges: 1

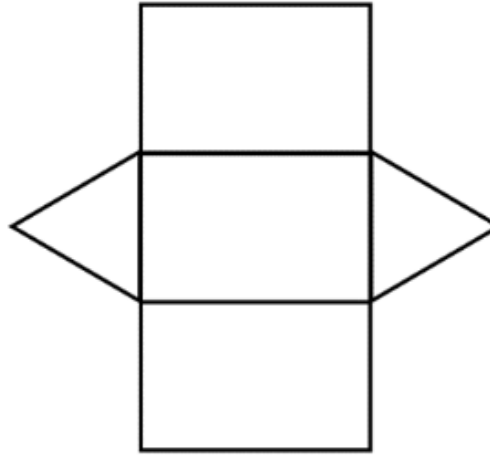
Vertices: 0 or 1

3

Triangular Prism



Triangular Prism Net



Faces: 5

Edges: 9

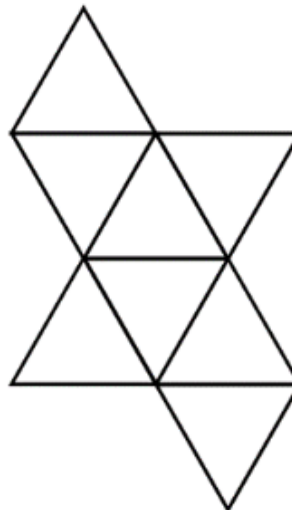
Vertices: 6


4


Octahedron




Octahedron Net



Faces: 

Edges: 

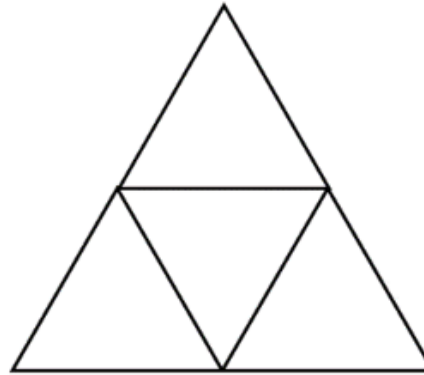
Vertices: 

5

Tetrahedron (Triangular-based Pyramid)



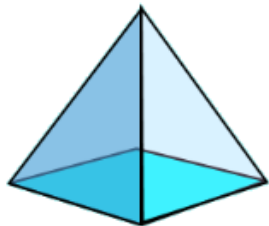
Tetrahedron Net



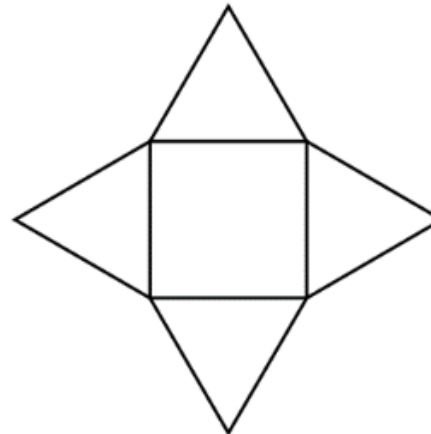
Faces: 4
Edges: 6
Vertices: 4

6

Square-based Pyramid



Square-based Pyramid Net



Faces: 5
Edges: 8
Vertices: 5

Problem solving

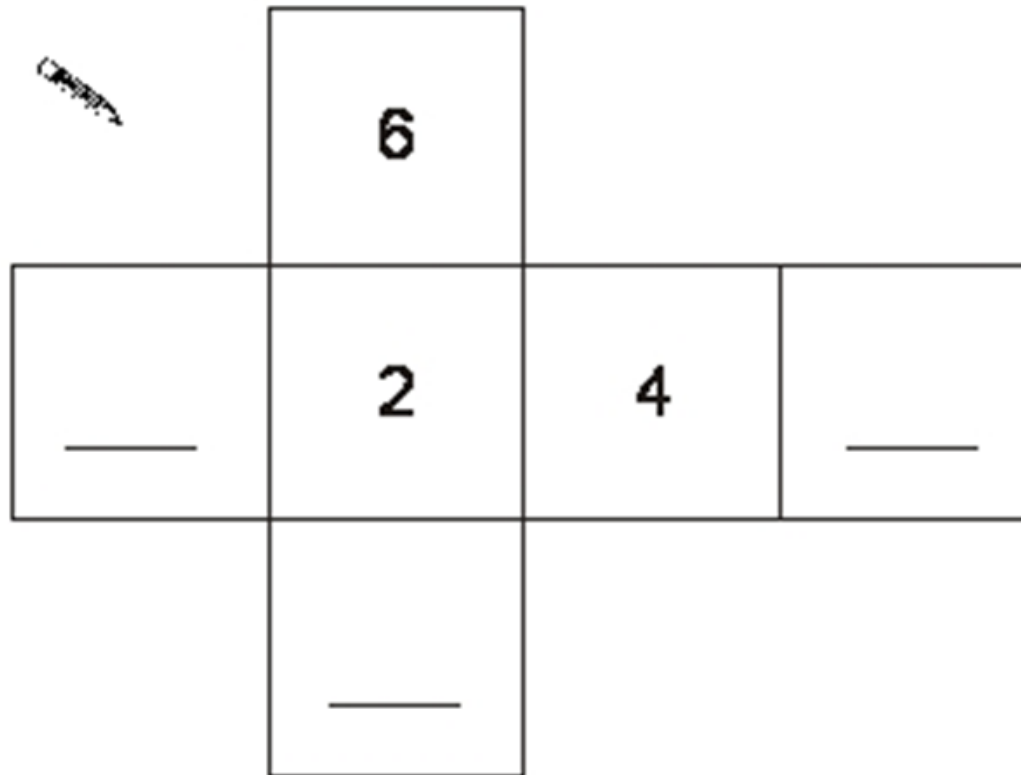
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1

The diagrams show nets for dice.

Each dice has six faces, numbered 1 to 6.

Write the missing numbers so that the numbers on **opposite faces add to 7**.



2

The table shows descriptions of the nets of some solid shapes. Write in the table the name of each solid shape. The first one has been done for you.

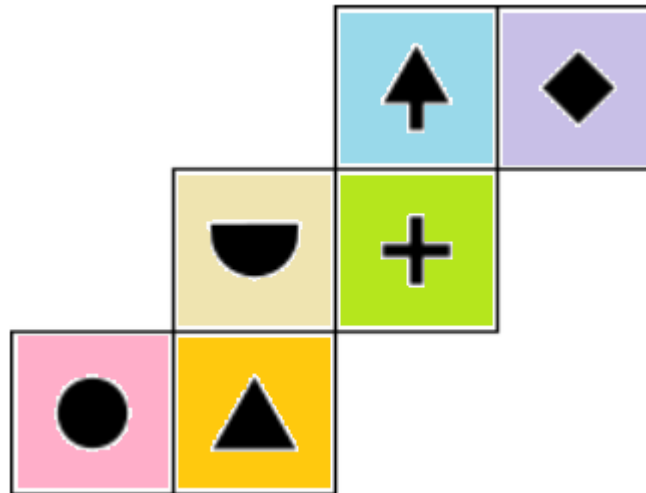
Description of the net	Solid shape
6 rectangles	Cuboid
6 squares	
2 circles 1 rectangle	
1 square 4 triangles	

3

The net below is folded into a cube.

It is placed on the table with the face  on the top.

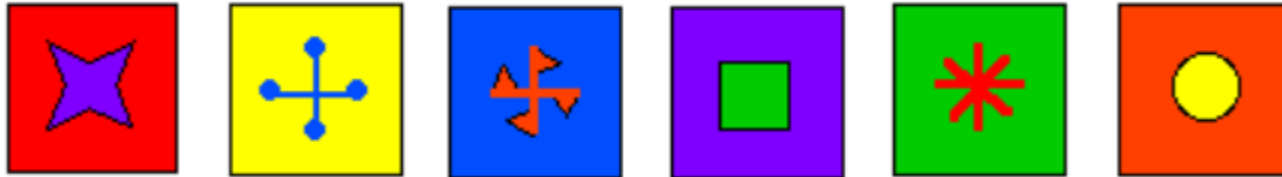
Which face is at the bottom?



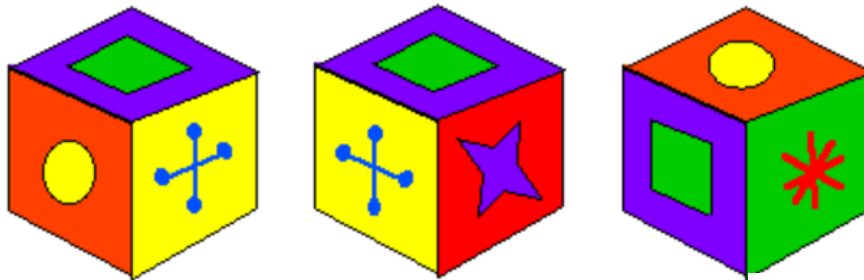
Problem solving

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4 Here are six faces of a cube in no particular order.

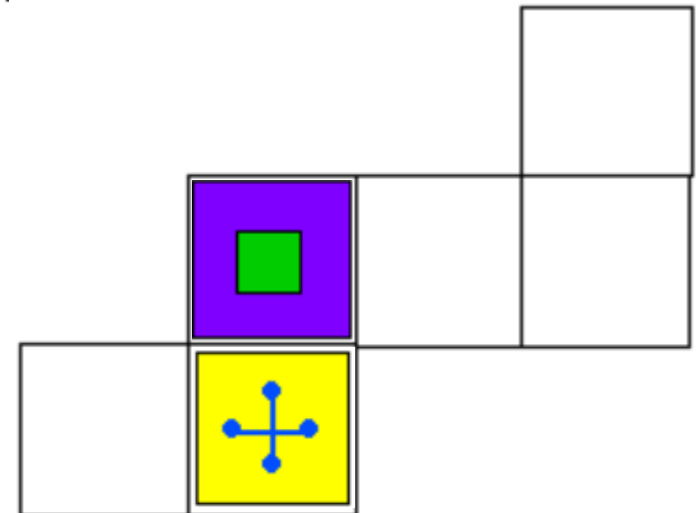


Here are three views of the cube.



Can you place each side in the correct position on the net?

Two squares are already placed for you.

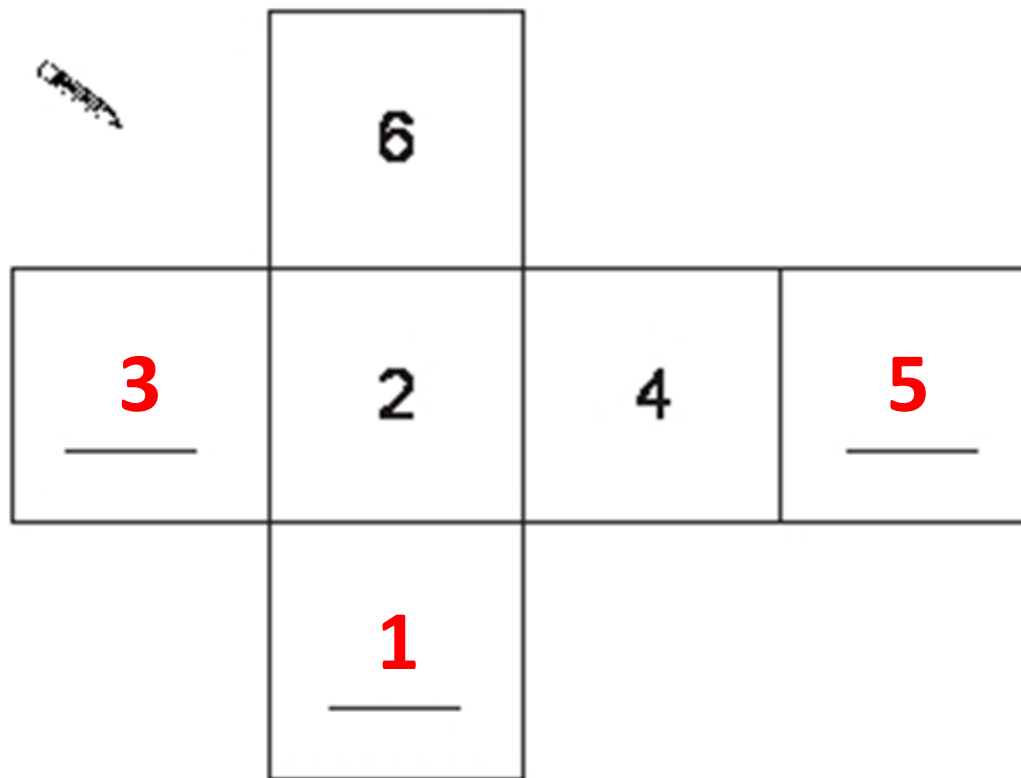


1

The diagrams show nets for dice.

Each dice has six faces, numbered 1 to 6.

Write the missing numbers so that the numbers on **opposite faces add to 7**.



2

The table shows descriptions of the nets of some solid shapes. Write in the table the name of each solid shape. The first one has been done for you.

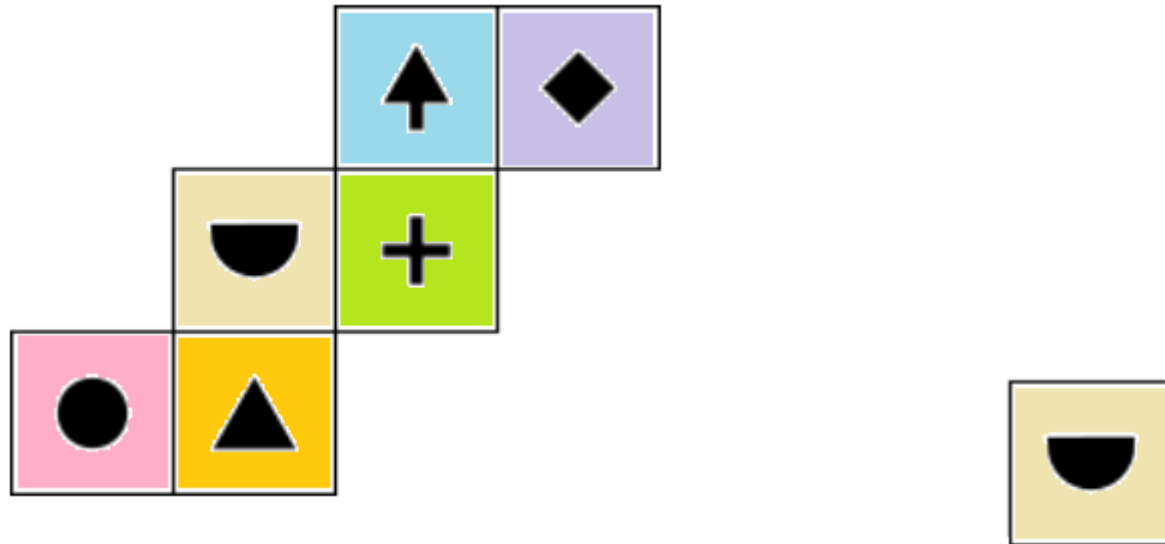
Description of the net	Solid shape
6 rectangles	Cuboid
6 squares	Cube
2 circles 1 rectangle	Cylinder
1 square 4 triangles	Square based pyramid

3

The net below is folded into a cube.

It is placed on the table with the face  on the top.

Which face is at the bottom?

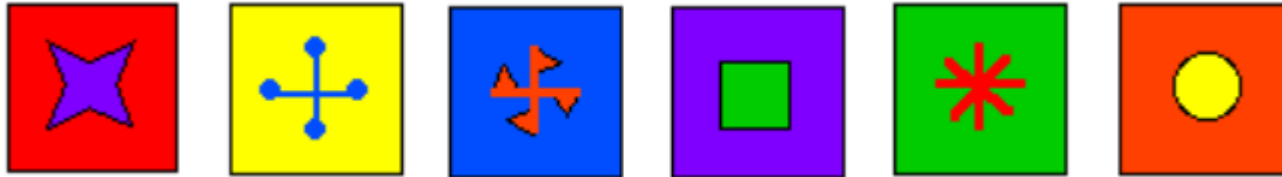


Answers

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4

Here are six faces of a cube in no particular order.

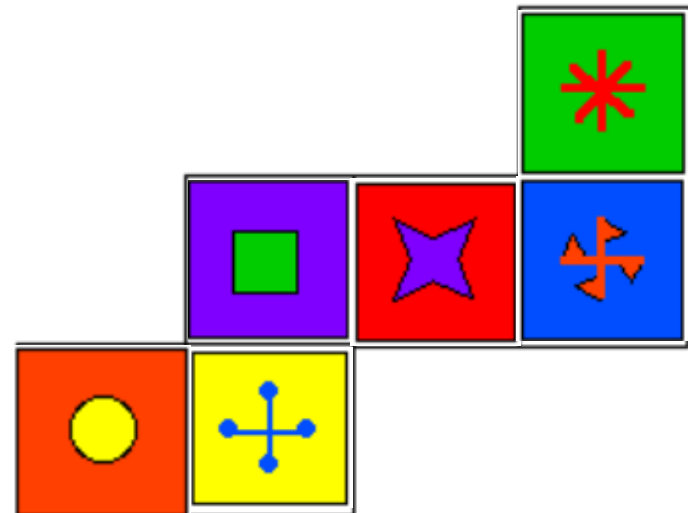


Here are three views of the cube.



Can you place each side in the correct position on the net?

Two squares are already placed for you.



End of the lesson

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Well done for completing the lesson.



Reflections