

Maths

Summer Term Week 6

Starters:

- Use the factor bug to find the factors of 36, 48 and 60.
- Multiply 264×4 and 362×6 . Check with calculator.
- Find $\frac{1}{3}$ of 136, 219 and 429.
- Revise perimeter. Can you write a definition for it?
- Revise area. Can you write a definition for it?

L.O. To be able to recognise the nets of different Prisms.

A net is a 2D shape that you can fold to make a 3D shape.

AFL - What is a prism?

A prism is a polyhedron that has 2 faces the same shape that are parallel to each other.

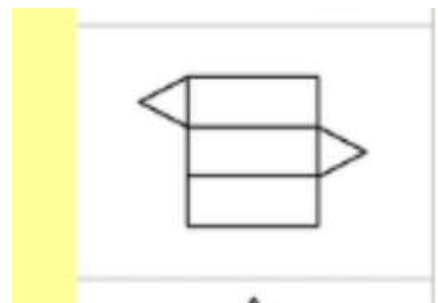
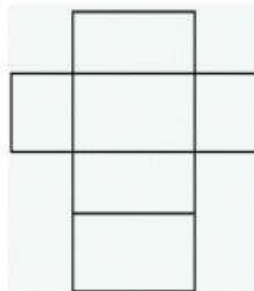
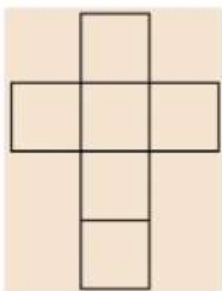
(Parallel faces are the same distance from each other all the way along.)

Any shape can form the base of a prism.

Polyhedrons

A **polyhedron** is a solid with flat faces
(from Greek poly- meaning "many" and -edron meaning "face").

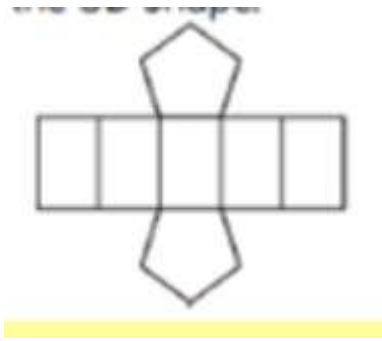
Each face is a **polygon**. (a flat shape with straight sides).



These are nets of Prisms.

They all have 2 faces that are the same shape and are parallel to each other. They also all have rectangular faces.

Task 1:



What 3D shape will this prism make? Describe the 2D shapes used to make it.

Task 2:

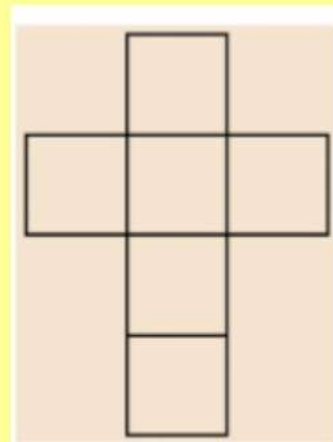
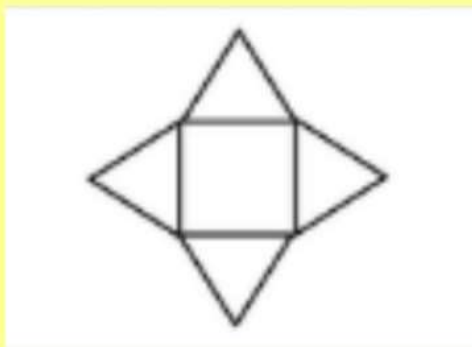
1) Draw the nets of:

- triangular prism
- pentagonal prism
- hexagonal prism
- cuboid

Try to describe them underneath if you can.

Task 3:

Discuss similarities and differences between the nets of a square based pyramid and a cube.



Task 4:

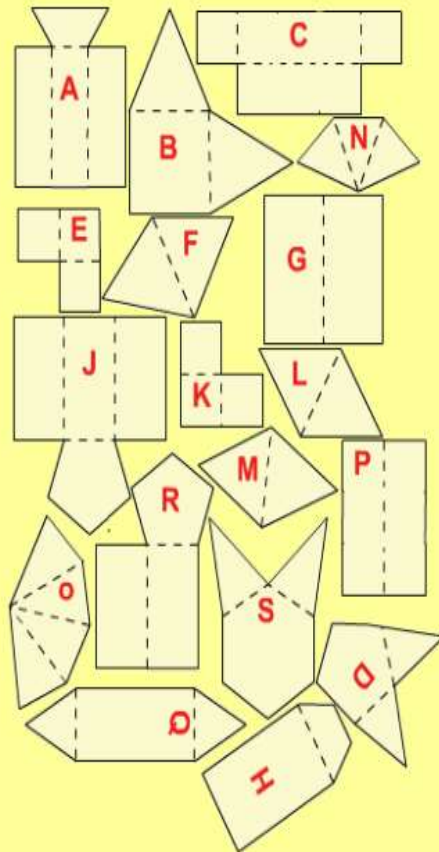
Draw the nets for a:

- Triangular-based pyramid
- Pentagonal pyramid
- Hexagonal pyramid

Can you describe the faces used for the net?

Task 5:

Here are the nets of 9 solid shapes. Each one of these has been cut into 2 pieces, like the net of the cube.



What knowledge could you use?

 + = Name of the shape

E4E: Can you explain how you know those two pieces go together? Give reasons.

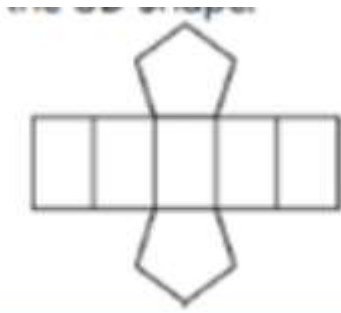
Can you see which pieces go together?

Task 6

Have a go at building a 3D shape from a net!

Answers:

Task 1:



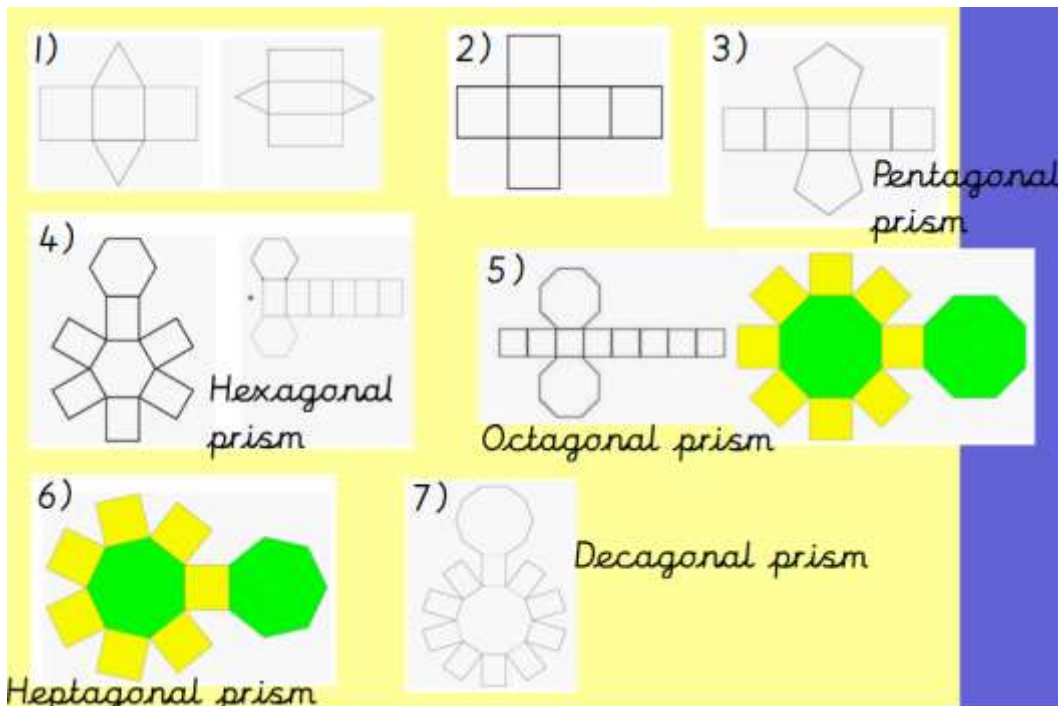
What 3D shape will this prism make? Describe the 2D shapes used to make it.

This will make a pentagonal prism. It has 2 pentagonal faces that are exactly the same shape, that will be parallel to each other. It also has 5 rectangular faces – each one connected to one side of the pentagonal face.

Task 2:

1) Draw the nets of:

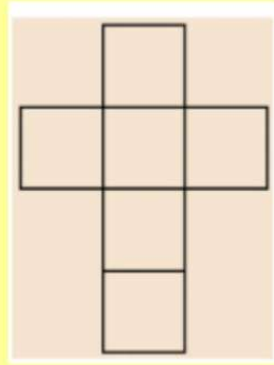
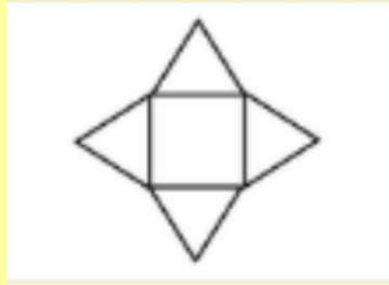
- triangular prism
- pentagonal prism
- hexagonal prism
- cuboid



I have included others that you might have tried yourself too.

Task 3:

Discuss similarities and differences between the nets of a square based pyramid and a cube.



They both have at least 1 square face. A square face in the middle is joined by other faces.

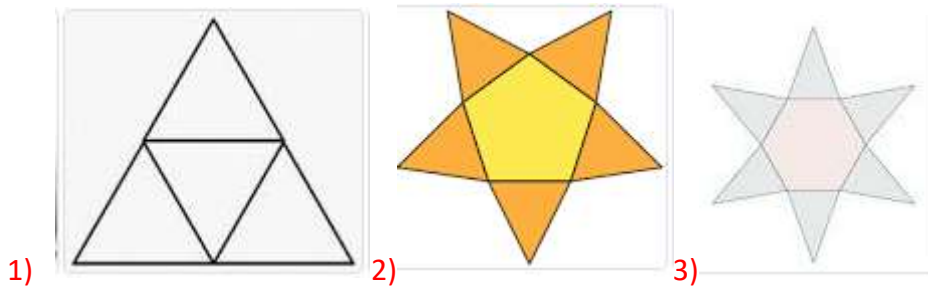
The pyramid has triangular faces, whereas the cube has square faces. In a cube, the faces are all the same, but the square-based pyramid has two different types of faces.

Task 4:

Draw the nets for a:

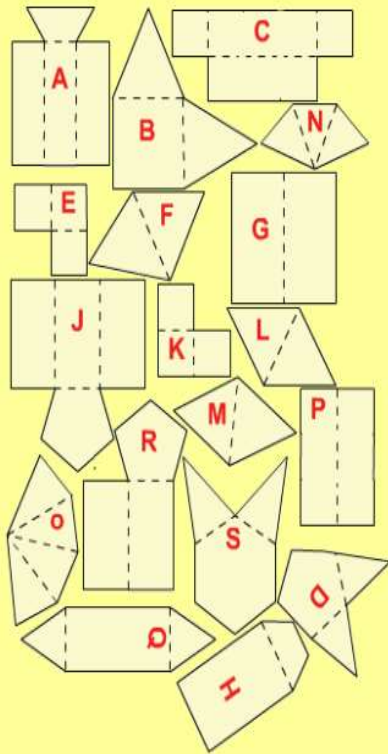
- Triangular-based pyramid
- Pentagonal pyramid
- Hexagonal pyramid

Can you describe the faces used for the net?



Task 5:

Here are the nets of 9 solid shapes. Each one of these has been cut into 2 pieces, like the net of the cube.



What knowledge could you use?

___ + ___ = Name of the shape

E4E: Can you explain how you know those two pieces go together? Give reasons.

Can you see which pieces go together?

