

IAL: to recognise and describe 3D shapes

Click the links to learn about 3D shapes.

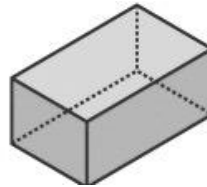
[Click here](#) and [Click here](#)

Choose from A, B and C. If you would like to complete more than one, you can!

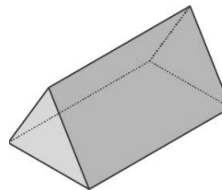
A) Name the shape and match it to its properties.

cylinder square based pyramid cuboid
cube triangular prism

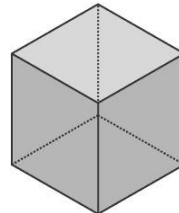
12 vertices
all faces are squares



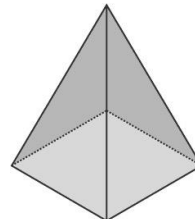
2 equilateral triangle faces
3 rectangle faces



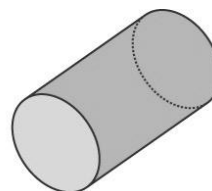
2 circle faces
2 edges



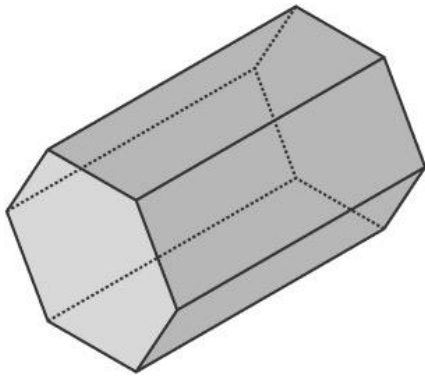
4 rectangle faces
12 vertices



4 isosceles triangle faces
square face base



B) Name the shape and write its properties.



Shape _____

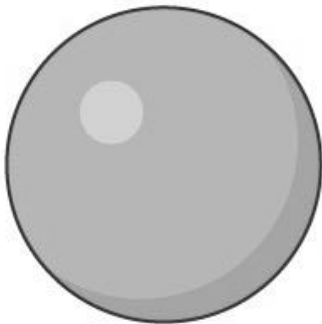
Properties

Vertices = _____

Edges = _____

2d shape Face = _____

2d shape Face = _____



Shape _____

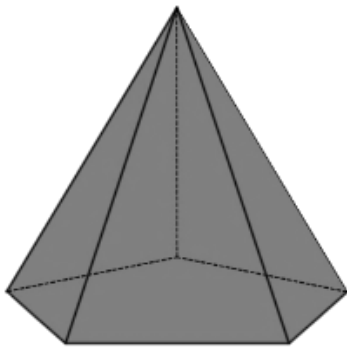
Properties

Vertices = _____

Edges = _____

2d shape Face = _____

2d shape Face = _____



Shape _____

Properties

Vertices = _____

Edges = _____

2d shape Face = _____

2d shape Face = _____

Look at the 3D shape below.

Circle the shapes that can be printed using this square-based pyramid.



C) Solve the shape problems below.

Mo has a 3D shape, he says,



One face of my 3D shape is a square.

What could Mo's shape be?

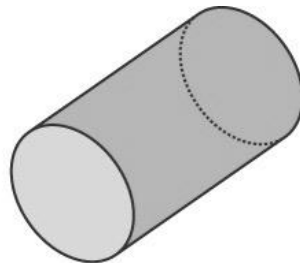
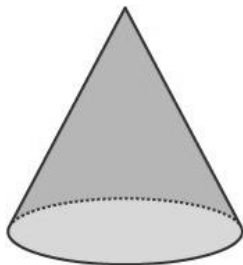
Alex says,

All 3d shapes are prisms.



Do you agree with Alex?
Explain why.

What is the same and what is different about the shapes below?
Explain mathematically.



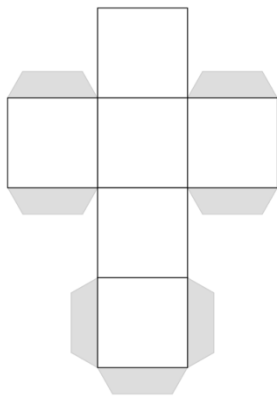
IAL: to recognise and describe 3D shapes

Click the links to learn about the nets of 3D shapes.

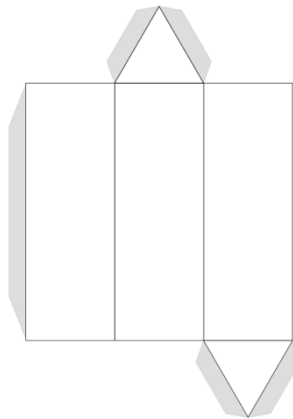
[Click here](#)

Choose from A, B and C. If you would like to complete more than one, you can!

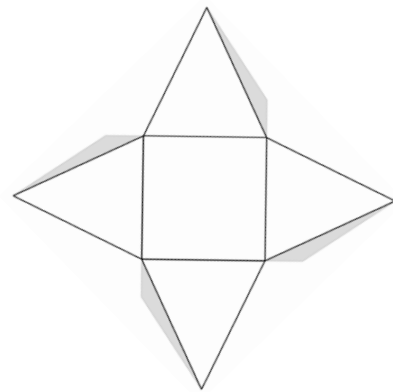
A) If you can, click the link and print out the nets, then construct a 3D shape.



cube



triangular prism



square based pyramid

Click the link and change the **choose model** button to print out the nets.

[Click here](#)

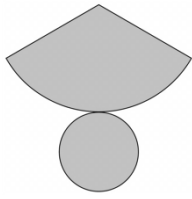
Write about how you made the shapes and how you had to be resilient while constructing it.

Cube: _____

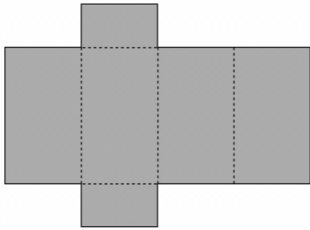
Triangular prism: _____

Square based pyramid: _____

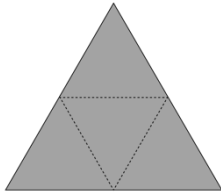
B) Match the 3D shapes below to their net.



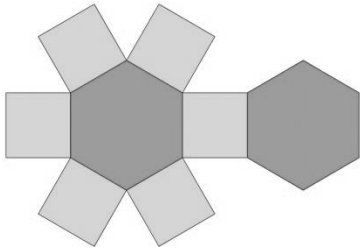
Square Based
Pyramid



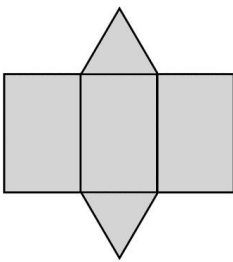
Triangular prism



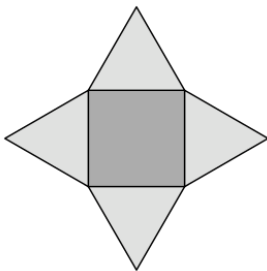
Cuboid



Hexagonal Prism



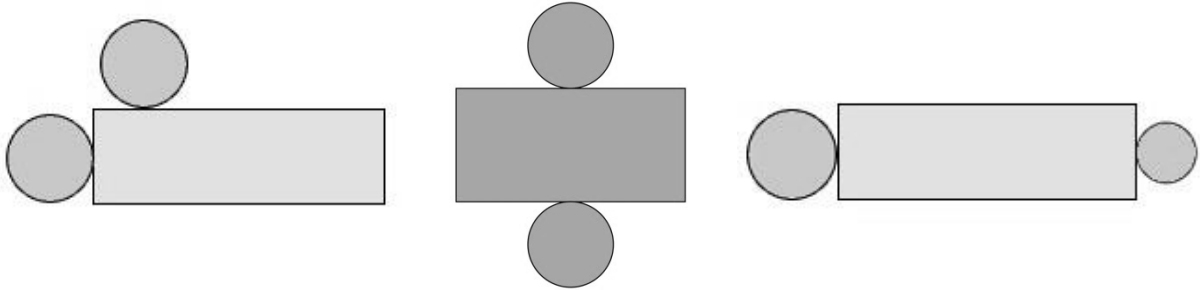
Cone



Triangular Pyramid

C) Solve the problems involving nets below.

Circle which of these nets below would create a 3D shape and what is its name?
Convince me how you know using its properties.



Use what you know about the nets of 3D shapes to answer the questions below.

True or false? What shape could you create?

Teddy says,



You can cut out lots of equal squares and make a 3-D shape from them.

Rosie says,

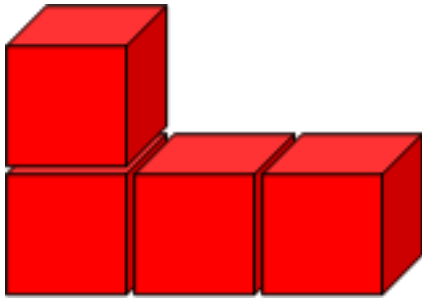


You can cut out some circles and rectangles and make a 3-D shape from them.

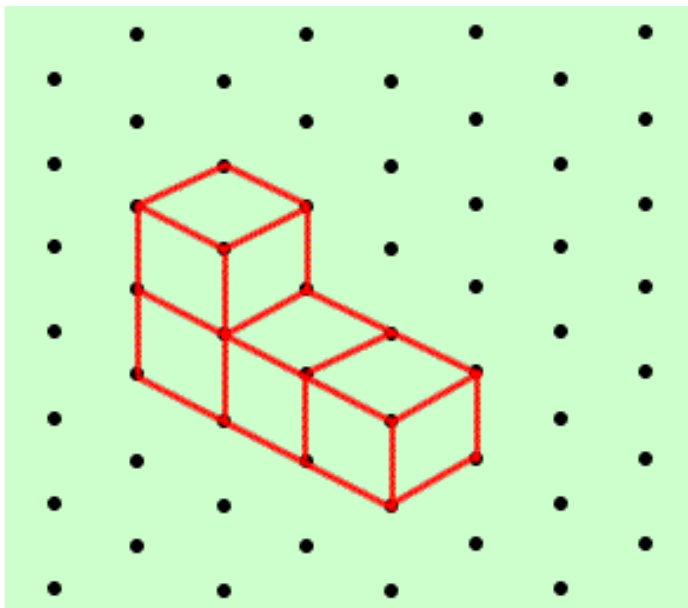
IAL: to solve a non-routine maths problem

Apply your understanding of 3D shape to investigate the problem.

Here are four cubes joined together:



We can draw this arrangement of cubes on dotted paper (isometric paper) which gives us a way of drawing 3D objects more easily:



How many other arrangements of four cubes can you find?
Can you draw them on dotted paper? It's more difficult than it looks!

Click the link for your own isometric paper.

[Click here](#)