



This week our concept is **geometry** - we're focusing on **3D shapes and their properties and angles on a straight line**.

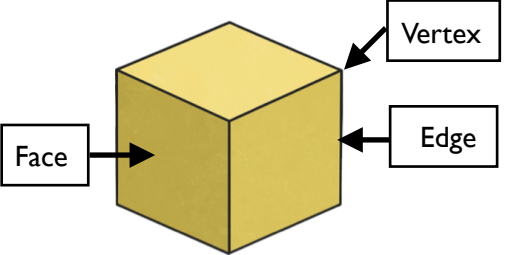
Have a go of some of the warm ups, read about the concept, and then try some of the different questions and problems! I've added some resources which may help!

Miss Ellison & Miss Gibson

3D Shapes

Week 3 - Excellent Egyptians

3D Shape	A shape with three dimensions - height, width and depth
Net	A flattened out three dimensional shape
Edge	The side of a shape.
Vertex	The point where two sides meet.
Vertices	More than one vertex. A cube has 8 vertices.
Face	The flat surface of a 3D shape.



Warm Ups!

Beat SIRI! - 3, 8 and 9 times table.

The answer is... 779. What is the question?

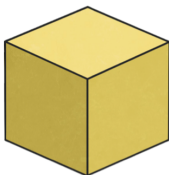
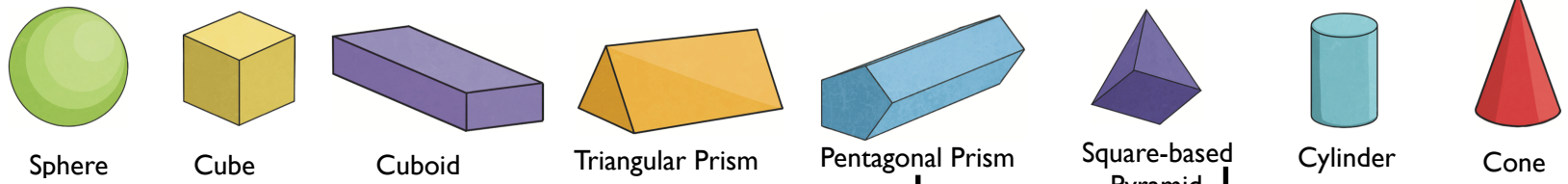
Which is the odd one out? Why?

Can you name the shapes? (Think back to last week)

Number of the day: 2,341

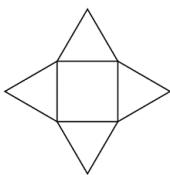
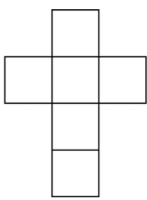
- Write it in words.
- Even or odd?
- Place value grid it.
- Draw it.
- Partition it.
- 10 more?
- 10 less?
- 100 more?
- 100 less?
- Write 2 equations to get this as the answer.

Times Table Bingo - 4 and 6 times table. Put multiples in the bingo grid, say a question in the times table, mark off if they have it.



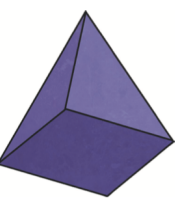
A cube has:
6 (square) faces
12 edges
8 vertices

Its net has 6 squares (think about the faces).



A square-based pyramid has:
5 (1 square, 4 triangle) faces
8 edges
5 vertices

Its net has 1 square and 4 triangles.



Angles

<https://www.bbc.co.uk/bitesize/topics/zb6tyrd/>

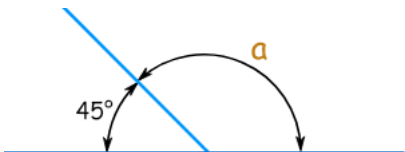
<https://www.youtube.com/watch?v=NVuMULQjb3o>

Acute Angle	Is less than 90°
Right Angle	Is exactly 90°
Obtuse Angle	Is greater than 90° but less than 180°
Straight Angle	Is exactly 180°
Reflex Angle	Is greater than 180°
Full Rotation	Is exactly 360°

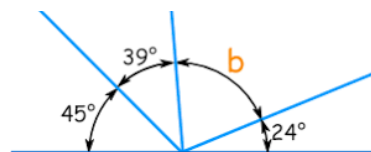
An angle is a measure of a turn, measured in degrees or °. There are 360° in a full turn.



Angles on a straight line always equal exactly 180°. In order to find a missing angle you need to add the existing angles (if there are more than one) then subtract from 180 as you are finding the difference.



1) $180 - 45 = 135$
a = 135°



1) $45 + 39 + 24 = 108$
2) $180 - 108 = 72$
b = 72°

Investigate

Carry out your own investigations to help you complete the table below.

Shape	Vertices	Edges	Faces
Cube			
Cuboid			
Triangular Prism			
Cylinder			
Square-based pyramid			
Pentagonal Prism			

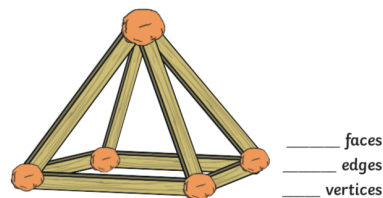
Use objects around your house that are the shapes above, for example books or DVD cases are often cuboids - count the number of faces, vertices and edges there are.



or ...

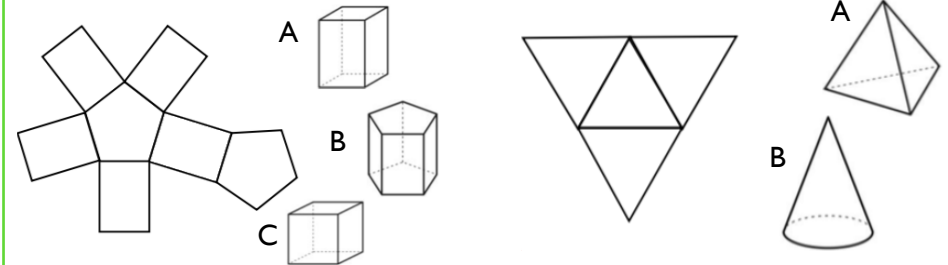
Use matchsticks or popsicle sticks and blue tack or plasticine to create the shapes then count the number of faces, vertices and edges.

Popstick 3D Shapes Challenge Cards
square-based pyramid



3D Shapes

Match the net to the correct 3D shape. Name the 3D shape



Match the faces to the correct 3D shape.

A square face

cube

2 pentagonal faces

square based pyramid

6 square faces

pentagonal prism

Which 3D shape does the statement describe?

- I have five faces. Two faces are triangles and three faces are rectangles.
- I have three faces. Two faces a flat and one is curved.

Below is one shape from the net of a 3D shape.

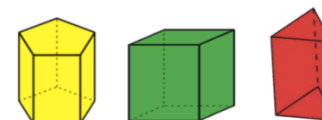


Name three 3D shapes that include this shape. List the other 2D shapes you would need to complete the net.

Which of these 3D shapes could cast this shadow?



Considering the properties of the 3D shapes below, which is the odd one out?



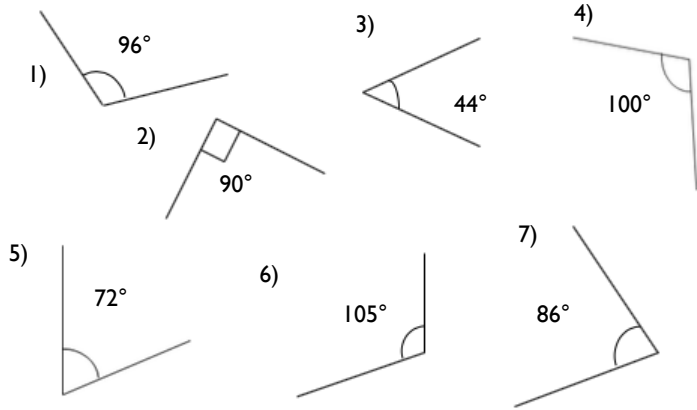
Explain your answer.

- Octagonal-based pyramid
- Hexagonal prism
- Pentagonal prism

Explain your answer.

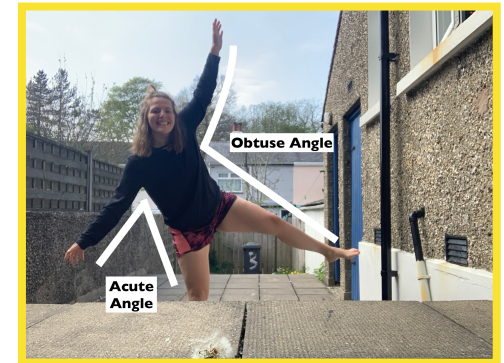
Angles

Identify the types of angles - are they acute, obtuse or right angles. Look carefully at the angle and picture.

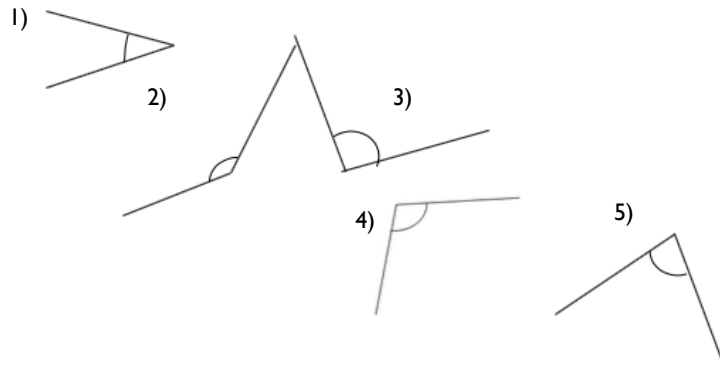


*Angle measurements are not to scale.

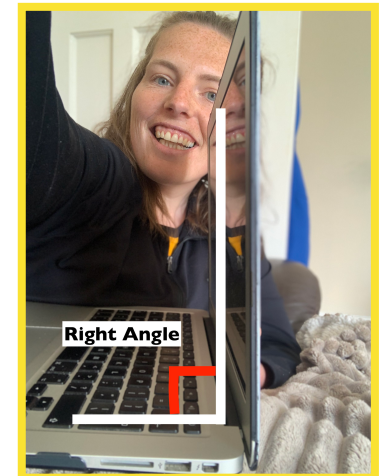
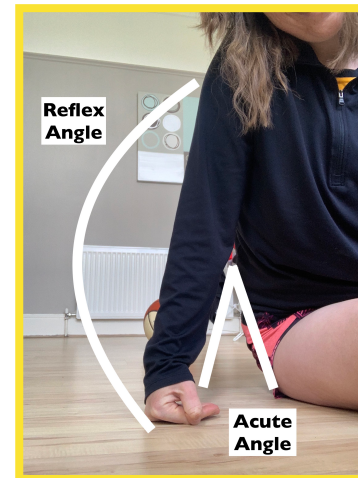
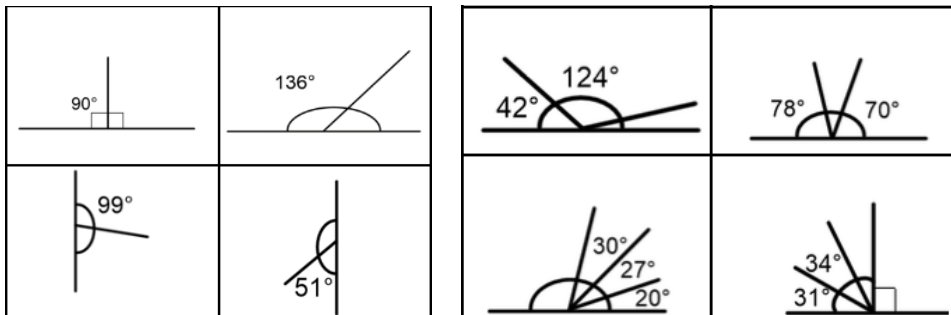
Can you make different types of angles with your body? Or with different objects?



Identify the types of angles - are they acute, obtuse or right angles. Look carefully at the picture.



Find the missing angle. Remember - angles on a straight line always equal 180°



Maybe you could use art to create an angle picture too.