

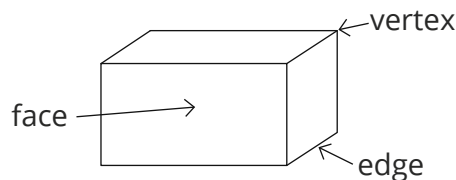
# Properties of 3D shapes

3D shapes are **solid shapes**. These are the ones you need to know.

<b>Cone</b>	<b>Sphere</b>	<b>Cuboid</b>
<b>Triangular Prism</b>	<b>Square-based Pyramid</b>	<b>Cube</b>
<b>Tetrahedron (triangle-based pyramid)</b>	<b>Cylinder</b>	

There are different parts of 3D shapes you need to be able to spot. These are:

- **vertices** (corners/the points at which the edges meet – a single point is called a **vertex**)
- **faces** (the flat surfaces)
- **edges** (the line where two faces meet).

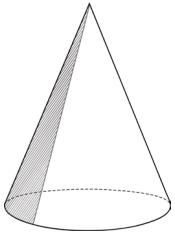


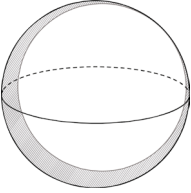
If you are asked to write down the number of faces, edges and vertices of the cuboid, then simply count them up – but don't forget the hidden ones!


A cuboid has **6** faces, **8** vertices and **12** edges.

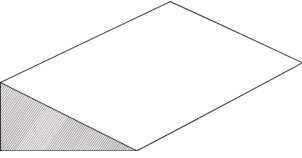
**Your Turn**

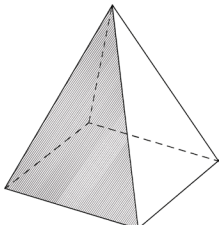
Complete the table for each 3D shape.

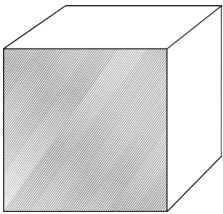
<p><b>Cone</b></p> 	<p>Vertices:</p> <input type="text"/>
	<p>Edges:</p> <input type="text"/>
	<p>Faces or Curved Faces:</p> <input type="text"/>

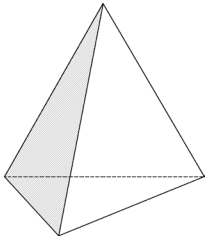
<p><b>Sphere</b></p> 	<p>Vertices:</p> <input type="text"/>
	<p>Edges:</p> <input type="text"/>
	<p>Faces or Curved Faces:</p> <input type="text"/>

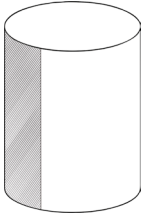
<p><b>Cuboid</b></p> 	<p>Vertices:</p> <input type="text"/>
	<p>Edges:</p> <input type="text"/>
	<p>Faces or Curved Faces:</p> <input type="text"/>

<p><b>Triangular Prism</b></p> 	<p>Vertices:</p> <input type="text"/>
	<p>Edges:</p> <input type="text"/>
	<p>Faces or Curved Faces:</p> <input type="text"/>

<p><b>Square-based Pyramid</b></p> 	<p>Vertices:</p> <input type="text"/>
	<p>Edges:</p> <input type="text"/>
	<p>Faces or Curved Faces:</p> <input type="text"/>

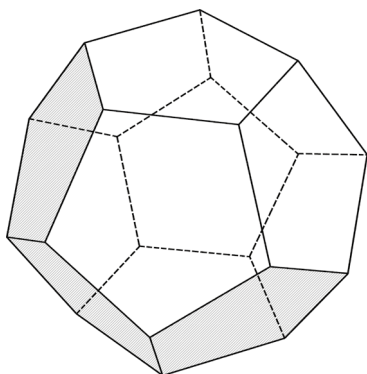
<p><b>Cube</b></p> 	<p>Vertices:</p> <input style="width: 100%; height: 20px;" type="text"/>
	<p>Edges:</p> <input style="width: 100%; height: 20px;" type="text"/>
	<p>Faces or Curved Faces:</p> <input style="width: 100%; height: 20px;" type="text"/>

<p><b>Tetrahedron</b></p> 	<p>Vertices:</p> <input style="width: 100%; height: 20px;" type="text"/>
	<p>Edges:</p> <input style="width: 100%; height: 20px;" type="text"/>
	<p>Faces or Curved Faces:</p> <input style="width: 100%; height: 20px;" type="text"/>

<p><b>Cylinder</b></p> 	<p>Vertices:</p> <input style="width: 100%; height: 20px;" type="text"/>
	<p>Edges:</p> <input style="width: 100%; height: 20px;" type="text"/>
	<p>Faces or Curved Faces:</p> <input style="width: 100%; height: 20px;" type="text"/>

### Challenge

A dodecahedron is made from 12 pentagons. Write down the number of faces, vertices and edges of a dodecahedron.



<p>Vertices:</p> <input style="width: 100%; height: 20px;" type="text"/>
<p>Edges:</p> <input style="width: 100%; height: 20px;" type="text"/>
<p>Faces or Curved Faces:</p> <input style="width: 100%; height: 20px;" type="text"/>