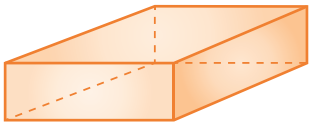
Sorting and classifying 3-D shapes

3-D shapes can be classified using properties such as these.

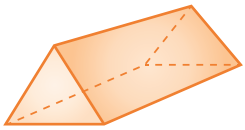
- number of faces, vertices and edges
- whether they have flat or curved faces
- whether they have a constant cross section

Examples

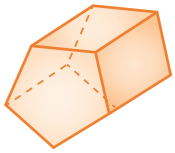
Prisms



rectangular prism



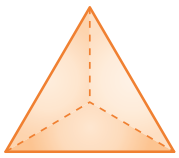
triangular prism



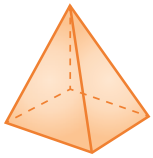
pentagonal prism

The faces are all polygons. Prisms have a constant cross section.

Pyramids



triangular pyramid (tetrahedron)



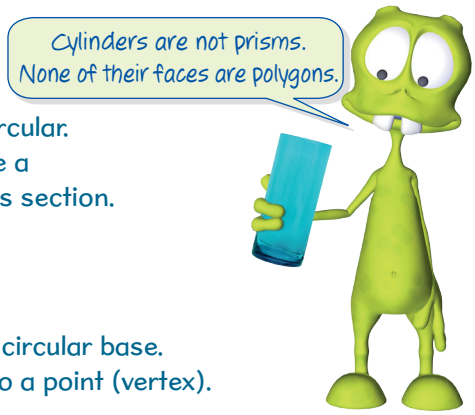
square-based pyramid

hexagonal pyramid

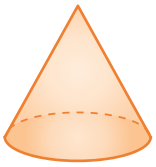
The base is a polygon. Side faces are triangular and meet at a point (vertex).

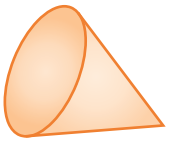
Cylinder

The base is circular. Cylinders have a constant cross section.



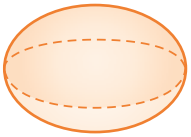
Cone



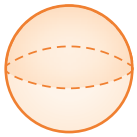


Cones have a circular base. Cones taper to a point (vertex).

Ellipsoids



ellipsoid

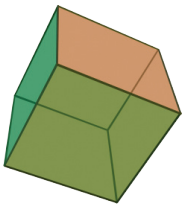


sphere

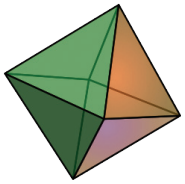
These have one curved face.

Regular polyhedra

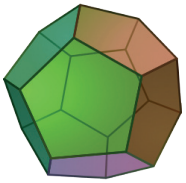
tetrahedron (4 faces)



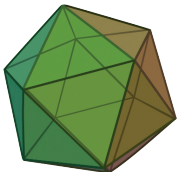
cube (6 faces)



octahedron (8 faces)



dodecahedron (12 faces)



icosahedron (20 faces)