

Polyhedrons

Polyhedrons Throughout History

Polyhedrons appeared in early **architectural forms** such as cubes and cuboids, with the earliest four-sided pyramids of ancient **Egypt** also dating from the Stone Age.

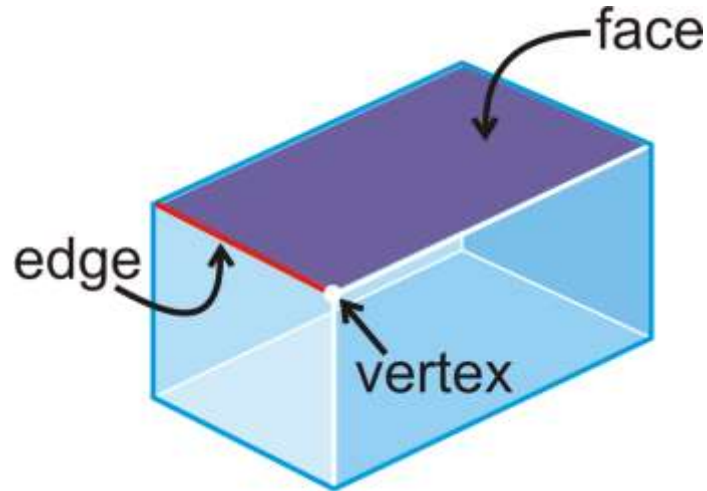
The earliest known *written* records of these shapes come from Classical **Greek** authors, who also gave the first known mathematical description of them. The earlier Greeks were interested primarily in the **convex regular polyhedra**, which came to be known as the **Platonic solids**.

As with other areas of Greek thought maintained and enhanced by Islamic scholars, Western interest in polyhedrons revived during the Italian **Renaissance**. Artists constructed skeletal polyhedra, depicting them from life as a part of their investigations into **perspective**.



Polyhedron

A **three-dimensional** shape with flat **polygonal faces**, straight **edges** and **vertices**.



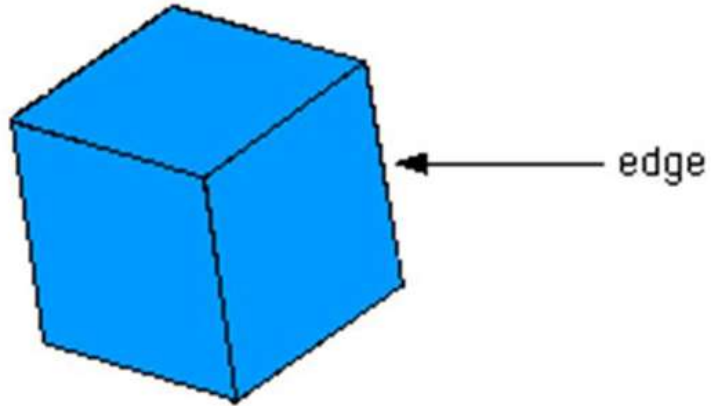
Face

A flat **surface** that forms part of the boundary of a solid object; a three-dimensional solid bounded exclusively by faces is a **polyhedron**.



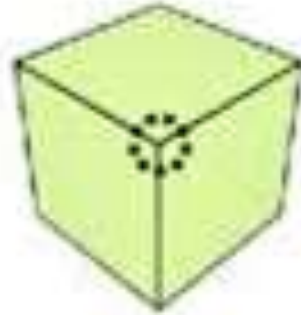
Edge

The **line segment** formed by the intersection of two faces.



Vertex

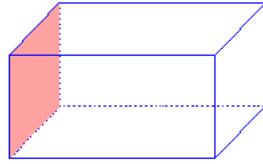
A point where **three or more** edges meet.



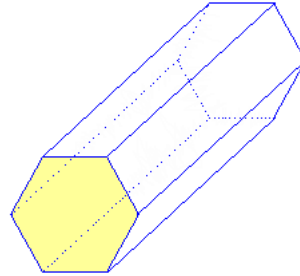
vertex

Prism

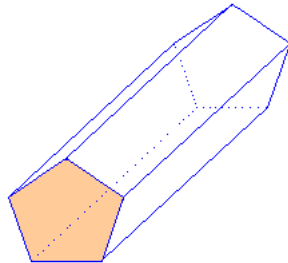
A prism is a **type of polyhedron with two identical faces that are parallel to each other** and that are called bases. The bases are connected by a set of rectangles.



Rectangular prism



Hexagonal prism

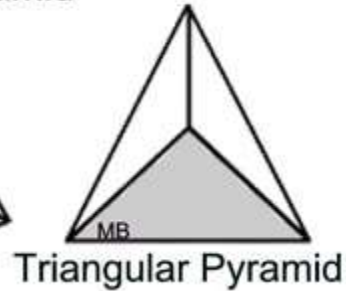
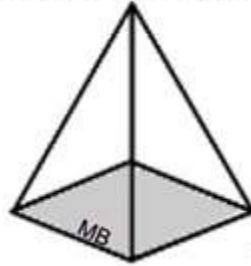


Pentagonal prism

Pyramid

A pyramid is a polyhedron for which the base is a polygon and **all lateral faces are triangles**.

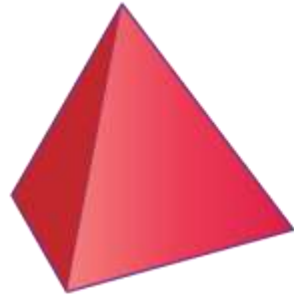
Rectangular Pyramid



Platonic Solids

Any of the five geometric solids whose faces are all identical, regular polygons meeting at the same three-dimensional angles. Also known as the five regular polyhedrons, they consist of the **tetrahedron** (or triangular pyramid), **cube**, **octahedron**, **dodecahedron**, and **icosahedron**.

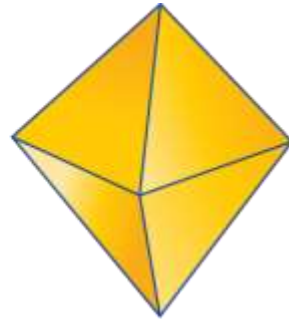
Different Polyhedrons



Tetrahedron



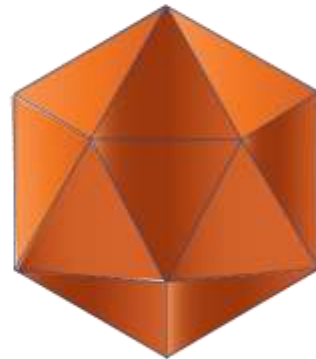
Cube



Octahedron



Dodecahedron



Icosahedron

<https://create.kahoot.it/details/5b8870cb-6d68-4725-aa9c-d5547799d2da>