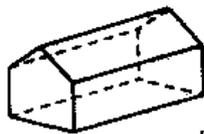
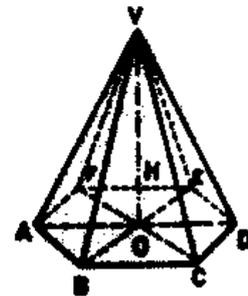
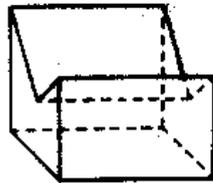


## POLYHEDRA

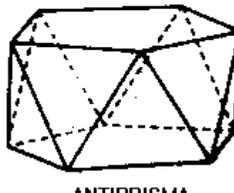
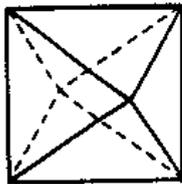
**Polyhedra are geometric shapes whose faces are polygons.** With a so generic definition it is easy to imagine that infinite polyhedra exist. Many of them will be very familiar to you, because apart from having seen them in your lessons of Mathematics, their shapes are present in a great amount of things surrounding us.



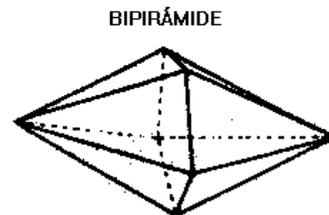
PRISMAS



PIRÁMIDE

OCTAEDRO:  
ANTIPRISMA y BIPIRÁMIDE

ANTIPRISMA



BIPIRÁMIDE

<sup>1</sup>In order to distinguish and to identify them, polyhedra **are classified in families**. Let us see some of them, as well as the characteristics that will enable us to know what family a certain polyhedron belongs to:

### **P** Regular polyhedra or Platonic solids:

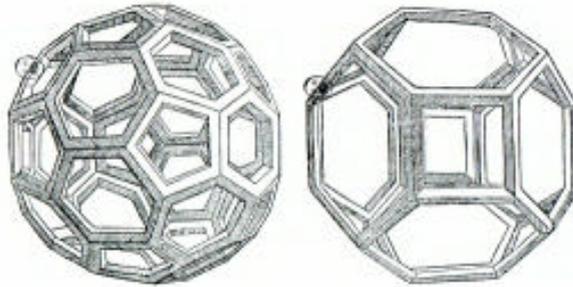
- **Their faces are regular equal polygons and their vertexes are equal.**
- They are only five and they are named according to the number of their faces: **tetrahedron, hexahedron or cube, octahedron, dodecahedron and icosahedron.**

<sup>1</sup> Prisms, Pyramid, Octahedron (Antiprism and Bipyramid), Antiprism, Bipyramid

**P** Semiregular polyhedra:

- They are polyhedra **whose faces are regular polygons**, although not equal all of them, but **whose vertexes** must be so.

**P** There are infinites, that belong in their majority to two families: **prisms and antiprisms** of regular faces, of which we will talk about later on. Apart from those, we have other 13 left, with the name of **Archimedean solids**. In the following figure you can see the drawings of two of them made by Leonardo da Vinci:



- The Archimedean solids are named after another polyhedron from which they come from, by means of certain cuts in their vertexes or edges. As you will see some of them have almost unpronounceable strange names, but do not worry, we do not want you to learn them by heart:

**P** **truncated tetrahedron, truncated cube, truncated octahedron, truncated dodecahedron, truncated icosahedron, cuboctahedron, icosidodecahedron, small rhombicuboctahedron, great rhombicuboctahedron, small rhombicosidodecahedron, great rhombicosidodecahedron, snub cube and snub dodecahedron.**

**P** Prisms:

- They have **2 parallel bases connected by rectangles**.

- If the polygons of the bases are regular and they are linked to each other by squares, the resulting type of prism would be a semi regular polyhedron.

**P** Antiprisms: