

Math Tips: Solid (3D) Geometry

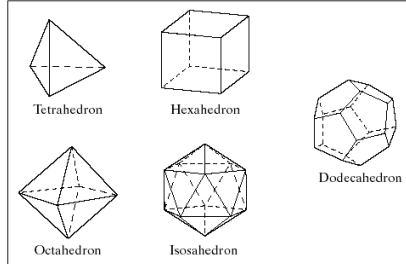
Key Terms:

Polyhedron: Any solid (3D) shape with all flat faces.

# Flat Faces	Type of Polyhedron
4	Tetrahedron
5	Pentahedron
6	Hexahedron
7	Heptahedron
8	Octahedron
9	Nonahedron
10	Decahedron

Platonic Solid: A solid (3D) shape where 1) each face is an identical regular polygon, and 2) the same number of polygons meet at each vertex (corner.) **Cool fact:** Only five types of regular polygons can form *platonic solids* – the others don't work!

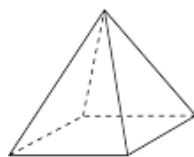
Platonic Solids



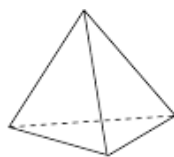
# Flat Faces	Base Shape	Platonic Solid
4	Equilateral Triangle	Tetrahedron
6	Square	Hexahedron
8	Equilateral Triangle	Octahedron
9	Pentagon	Dodecahedron
10	Equilateral Triangle	Truncated Tetrahedron

Pyramid: A solid (3D) shape where:

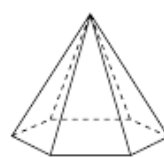
- 1) the base is **any regular polygon**
- 2) the sides are triangles that meet at the top (apex)



square-based pyramid



triangular-based pyramid



hexagonal-based pyramid