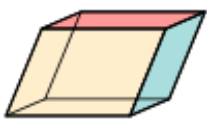

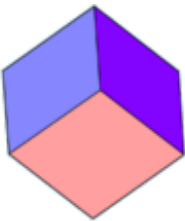
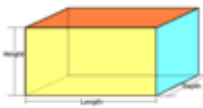
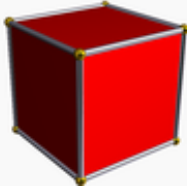
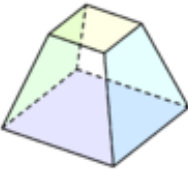
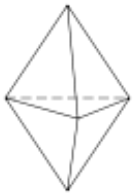
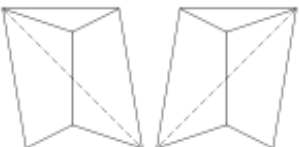
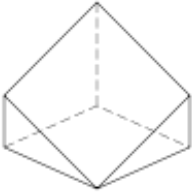
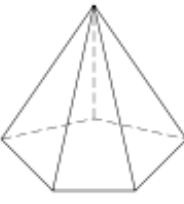
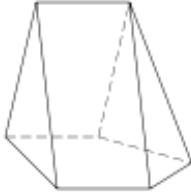
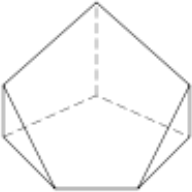


Hexahedron



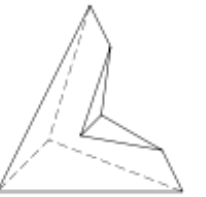
From Wikipedia, the free encyclopedia

A **hexahedron** (plural: hexahedra) is any polyhedron with six faces. A cube, for example, is a regular hexahedron with all its faces square, and three squares around each vertex.

There are seven topologically distinct *convex* hexahedra,^[1] one of which exists in two mirror image forms. (Two polyhedra are "topologically distinct" if they have intrinsically different arrangements of faces and vertices, such that it is impossible to distort one into the other simply by changing the lengths of edges or the angles between edges or faces.)

Quadrilaterally-faced hexahedra 6 faces, 12 edges, 8 vertices					
 Parallelepiped (three pairs of parallelograms)	 Rhombohedron (three pairs of rhombi)	 Trigonal trapezohedron (congruent rhombi)	 Cuboid (three pairs of rectangles)	 Cube (square)	 Quadrilateral frustum (apex- truncated square pyramid)
Others					
 Triangular bipyramid 3 ⁶ Faces 9 E, 5 V	 Tetragonal antiwedge. Chiral – exists in "left- handed" and "right- handed" mirror image forms. 4.4.3.3.3.3 Faces 10 E, 6 V	 4.4.4.4.3.3 Faces 11 E, 7 V	 Pentagonal pyramid 5.3 ⁵ Faces 10 E, 6 V	 5.4.4.3.3.3 Faces 11 E, 7 V	 5.5.4.4.3.3 Faces 12 E, 8 V

There are three further topologically distinct hexahedra that can only be realised as *concave* figures:

Concave		
 4.4.3.3.3.3 Faces 10 E, 6 V	 5.5.3.3.3.3 Faces 11 E, 7 V	 6.6.3.3.3.3 Faces 12 E, 8 V

References

- [^] Counting polyhedra (<http://www.numericana.com/data/polycount.htm>)

See also

- Prismaticoid

External links

- Polyhedra with 4-7 Faces (<http://www.uwgb.edu/dutchs/symmetry/poly4-7f.htm>) by Steven Dutch

Retrieved from "<http://en.wikipedia.org/w/index.php?title=Hexahedron&oldid=610778933>"

Categories: Polyhedra

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