

## Tesseract

Also known as a "Hypercube".

This is a generalized cube. You can construct it by starting with a cube and extruding it perpendicular to itself. Or you can take all permutations of the coordinates  $(\pm 1, \pm 1, \pm 1, \pm 1)$ .

It has:

16 vertices

32 edges

24 faces (squares)

8 cells (cubes)

Schläfli Symbol: 4,3,3

Its dual is the 3,3,4 ("Hyper Octahedron")

It's one of the 6 Platonic Hypersolids.