



**Definition**

A *polytope* is the convex hull of a set of finitely many points.

An *m-dimensional simplex* is the convex hull of  $m + 1$  affinely independent points; an  $m$ -dimensional simplex is a polytope. The points are called the *vertices* of the simplex.

When  $m = 0, 1, 2, 3$  the simplex is a *point*, *closed line segment*, *triangle* or *tetrahedron*.



