

The order of a complex is the maximum order of its simplices. A complex Σ^d of order d is also called a d -complex. A d -complex is regular if each simplex is an s -face of a d -simplex. Two simplices σ_1 and σ_2 in a complex Σ are s -adjacent if they have a common s -face; they are s -connected if a sequence of simplices in Σ exists, beginning with σ_1 and ending with σ_2 , such that any two consecutive terms of the sequence are s -adjacent. In the following, face and adjacency (without prefix) of a d -simplex stand for $(d - 1)$ -face and $(d - 1)$ -adjacency. $K^s(\Sigma^d)$ ($0 \leq s \leq d$) denotes the set of s -simplices belonging to Σ^d , and $|K^s|$ denotes their number. With some abuse of language, we call K^s the s -skeleton. The set of vertices of Σ^d is therefore $K^0(\Sigma^d)$, and the set of d -simplices is $K^d(\Sigma^d)$.