planetmath.org

Math for the people, by the people.

independent set and independence number

Canonical name	IndependentSetAndIndependenceNumber
Date of creation	2013-03-22 14:30:06
Last modified on	2013-03-22 14:30:06
Owner	rspuzio (6075)
Last modified by	rspuzio (6075)
Numerical id	6
Author	rspuzio (6075)
Entry type	Definition
Classification	msc 05C69
Synonym	stable set
Synonym	anticlique
Related topic	Clique2
Defines	independent set
Defines	independence number

A set of vertices in a graph G is called an *independent set* if there are no edges between the vertices.

The *independence number* of a graph G, usually denoted by $\alpha(G)$, is the size of a maximal independent set in G. $\alpha(G) \geq \nu$ means that there are ν vertices with no edges between them.

An independent set is sometimes called a stable set or an anticlique.