

5 Introduction to Graph Theory

5.1 What is a graph?

5.1.1 Some definitions

5.1.2 Degree of a vertex

5.1.3 Some special graphs

5.2 Paths, cycles and connectivity

5.2.1 Paths

5.2.2 Cycles

5.2.3 Connectivity

5.3 Isomorphism of graphs

5.3.1 Showing that two graphs are isomorphic

5.3.2 Showing that two graphs are not isomorphic

5.4 Adjacency matrices and adjacency lists

5.4.1 Adjacency matrix of a graph

5.4.2 Adjacency lists