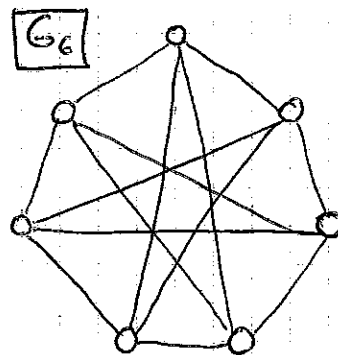
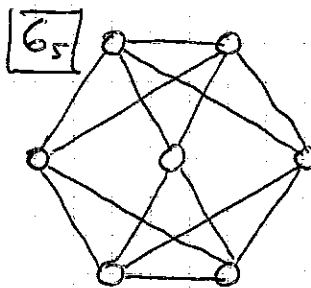
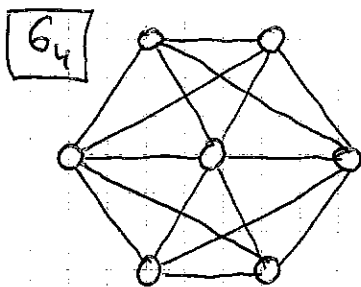
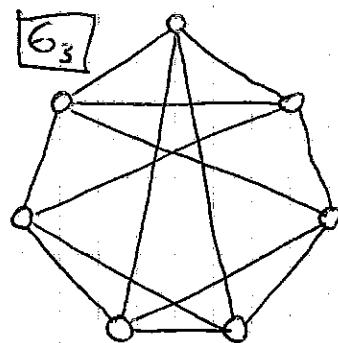
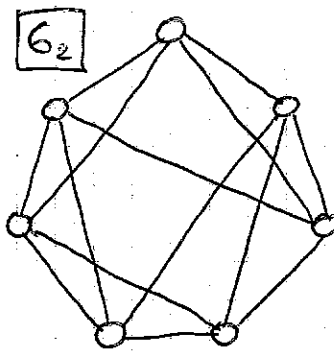
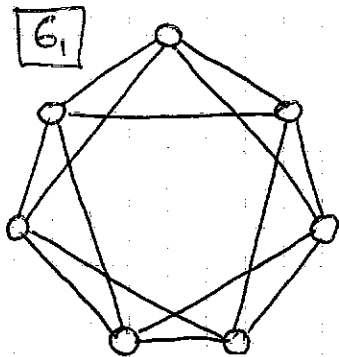


Homework 1

(1.1) Prove that a graph with more than six vertices of odd degree cannot be decomposed into three paths.

(1.2) Determine which pairs of graphs below are isomorphic



(1.3) Let G be a graph with girth 4 in which every vertex has degree k . Prove that G has at least $2k$ vertices. Determine all such graphs with exactly $2k$ vertices.