

MAT 145 HW4

Due on 02/24 right before the class starts.

Turn in solutions to **three** of the following problems which have been sorted roughly according to difficulty level. All problems are from the course textbook: *Combinatorics and Graph Theory, 2nd Edition* by Harris, Hirst and Mossinghoff

Difficulty 1: 1.4.1.1, 1.5.1.2

Difficulty 2: 1.3.1.3, 1.3.2.11, 1.4.2.7

Difficulty 3: 1.3.2.12

Extra 1: Let G be a connected graph. Show that G is a tree if and only if any three pairwise vertex-intersecting paths in G have a common vertex.