Graph Theory 2, MATH 5450, Spring 2023

Homework 10, 11.1. Colourings of Planar Maps, 14.1. Chromatic Number

Due Saturday, April 15, at 11:59 pm

Write in complete sentences!!! *Explain* what you are doing and convince me that you understand what you are doing and why. Justify all steps by quoting relevant results from the textbook, class notes, or hypotheses. Do not copy the work of others; **do your own work!!!**

11.1.4. Show that a graph is 4-vertex-colourable if and only if it is the union of two bipartite subgraphs.

14.1.3. (a) In a k-colouring of a k-chromatic graph, prove that there is a vertex of each colour which is adjacent to vertices of every other colour.