

Math 55: Discrete Mathematics, Fall 2008
Reading and Homework Assignment 14

Reading:

Lectures 38-39: 8.6

Lectures 40-42: 9.1–9.4, 9.7, 9.8

Homework (due Monday, 12/8):

Self-checking problems

8.6: 3, 25, 35, 61

9.1: 3, 5, 7, 9, 21

9.2: 5, 25, 31(d), 53(b)

9.3: 23, 37, 41

9.4: 3, 4, 5, 17(b,c), 45(c)

9.7: 3

9.8: 5, 9, 15

Problems to hand in:

8.6: 6, 22(c), 36

9.2: 18, 26(a,b), 34, 58

9.3: 38, 44

9.4: 18, 54

9.7: 6, 8

9.8: 12 (for graphs 5 and 9 only), 18

(A) Find the number of linear extensions (or *compatible total orderings*, in the terminology used by Rosen) of the poset whose Hasse diagram is shown in 8.6, Exercise 27.

(B) Find a planar graph which has chromatic number equal to 4, and does not contain a subgraph isomorphic to K_4 .