MTH 4140 Homework 3

Yaohui Wu

April 24, 2024

Problem 1

Section 2.3 Exercise 3

Solution. We run Kruskal's algorithm to get a minimum spanning tree (MST) of the graph built from the given adjacency matrix. The total weight of the MST is

$$3 + 3 + 7 + 8 = 21$$

The least cost of making all the cities reachable from each other is 21. ∎

Problem 2

Problem 3

Problem 4

Problem 5

Problem 6

Problem 7

Problem 8