

Traveling Salesperson Problem

Homework Assignment

Part 1.

You plan to visit four colleges in Montana: U of M in Missoula, University of Great Falls in (of course) Great Falls, MSU-Northern in Havre and MSU-Billings. You will begin and end in Polson. Being very frugal with your money, you want to find the shortest route that visits each college.

1. Draw a graph that shows all of the mileages between every pair of towns (I found Yahoo Maps very useful for finding these).
2. Draw a tree diagram that shows all possible ways to visit the four towns and return to Polson.
3. Determine the optimal tour that visits each town and returns to Polson.

Part 2.

Choose any four colleges or universities anywhere in the U.S. (or Canada, if you like) to visit. You will still begin and end in Polson.

1. Draw a graph that shows all of the mileages between every pair of towns.
2. Draw a tree diagram that shows all possible ways to visit the four colleges and return to Polson.
3. Determine the optimal tour that visits each town and returns to Polson.