

Computer Laboratory Session 5

Aim

Applying Management Science to find the most cost efficient National Grid

Objectives

- To formulate a solution procedure
- To execute this procedure

Challenge – National Grid - Minimal Spanning Tree

Several electricity, telecommunication, gas and water companies are jointly planning to build a network to connect several cities, as shown in figure 1. The miles between cities are shown on each branch. Determine a national grid that will connect all 10 cities, using the minimum number of miles.

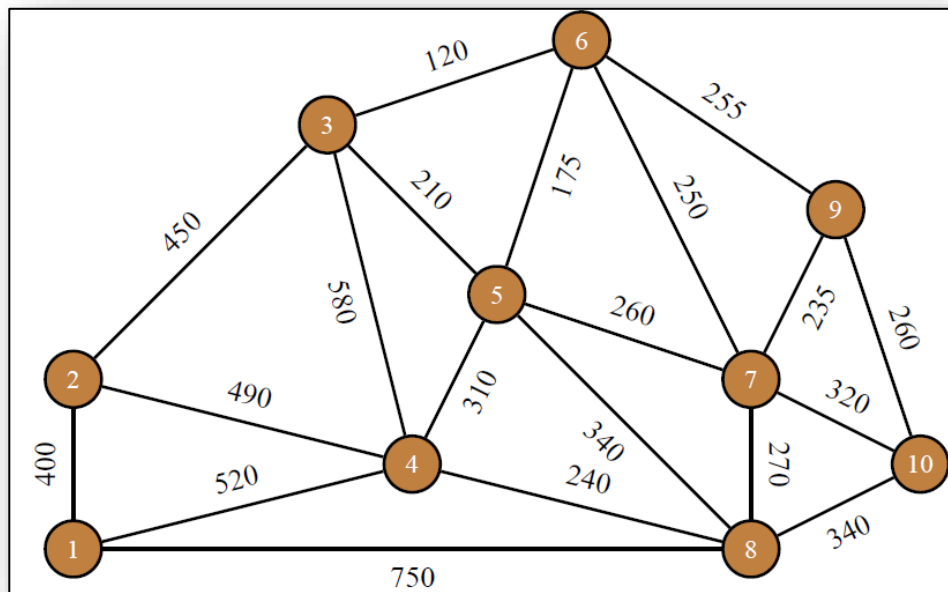


Figure 1 Network of Cities.

Tasks

1. Formulate the solution method (procedure) in words.
2. Show a graph of the optimal network (minimal spanning tree).
3. Compute how many miles of pipe will be used.

