1. Consider the network shown in Chapter 11, Problem 13 of the text. Ignore the signs in the arc labels so that all the numbers associated with the arcs are non-negative.

   • Interpret the numbers on arcs as distances, find the shortest path tree from node 1 to every other node in the network using Dijkstra’s algorithm.

   • Interpret the numbers on arcs as distances, find the shortest path tree from node 1 to every other node in the network using the ”dynamic programming” algorithm discussed in lecture.

   • Interpret the numbers on arcs as capacities, find the maximum flow from node 1 to node 6 in that network, using the Ford-Fulkerson algorithm. Show that what you find is indeed a maximum flow by exhibiting a minimum-cut whose capacity is the same as the value of the flow you found.

2. Problem 8.5 of text