Introduction to Networking

Homework 3

Handed out: Monday, October 23, 2000
Due back: Monday, November 6, 2000 (at the start of class)
Notes: To be done individually
If you don't have the textbook, please see us for a copy of the problems

1. Textbook problem 4-1
2. Textbook problem 4-3
3. Textbook problem 4-4
4. Textbook problem 4-5
5. Textbook problem 4-6
6. Textbook problem 4-7
7. Textbook problem 4-8
8. Textbook problem 4-12
9. Textbook problem 4-13

Extra Credit Problems

Textbook problem 4-11

Read about the Floyd-Warshall algorithm for all-pairs shortest paths. What is the O() of this algorithm? How does it compare to the O() of Dijkstra? Consider the network of textbook problem 4-3. What would the cost of computing all pairs of shortest paths be using Dijkstra? How about using Floyd-Warshall? What might a distributed version of Floyd-Warshall look like (you are **not** being asked to design such an algorithm) ? Would Floyd-Warshall be useful in computing multicast routing trees?