

## Network Optimization (Fall 2008) — Homework 7

- The total points (given in parentheses) add up to 75. Math 566 students will be graded for 70 points, and Math 466 students for 65 points.
  - **This homework is due in class on Thursday, October 16.**
1. (25) AMO 5.7 (page 158-159).
  2. (20) AMO 5.11 (page 159).
  3. (30) Write a MATLAB code that takes as input the forward star representation of a network and a starting node  $s$ , and finds the shortest path to all nodes using the FIFO label correcting algorithm. The program should output the  $pred$  vector as well as the shortest path lengths (the vector  $d$ ). Name your file as `FIFO1c_firstname_lastname.m` and email the MATLAB file to me. Solve the shortest path problem in figure 5.10 (b) (page 158) as part of your code.