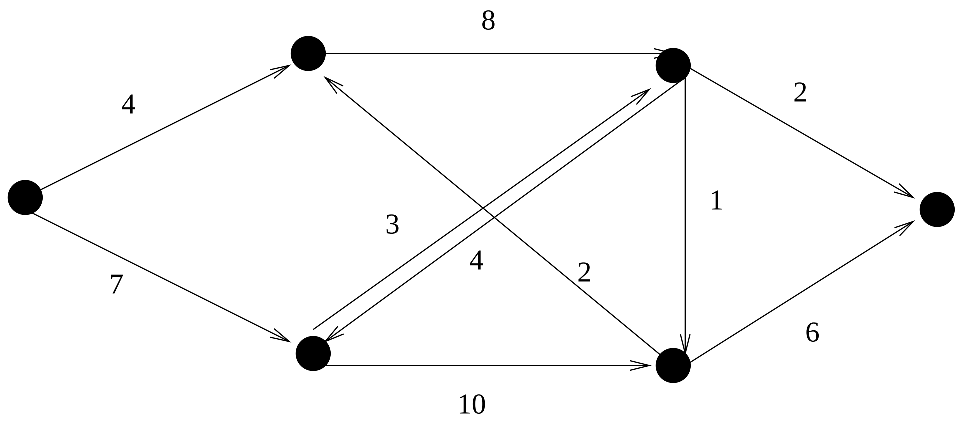
CS140: Algorithms

Fall 2001

Assignment 7

This assignment is due by noon Friday, October 19. You may collaborate with your classmates to complete this assignment but you must reference your collaborators. In addition, you must do your own write-up. This assignment is worth 100 points (65 points if handwritten except you may submit hand drawn solutions to problem 1).

1. Use the Karp-Edmonds algorithm to determine the maximum flow in the following network. Show the residual graph and augmenting path at each step. (The leftmost node is the source and the rightmost node is the sink.)



2. Problem 27-1 on page 625 of the text.
3. Problem 27-2 on page 626 of the text.
4. Problem 31.2.6 on page 745 of the text.