

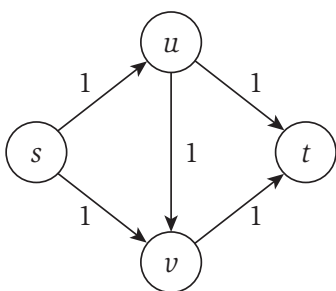
Fourth Hour 10

Your Name: \_\_\_\_\_

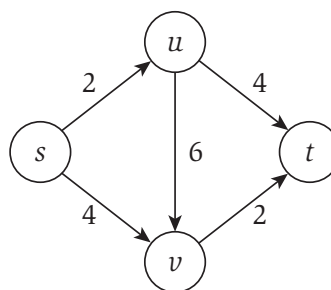
Collaborators: \_\_\_\_\_

You will be randomly assigned groups to work on these problems in discussion section.

**Problem 1. (10 points)** K&T Chapter 7, Exercise 1



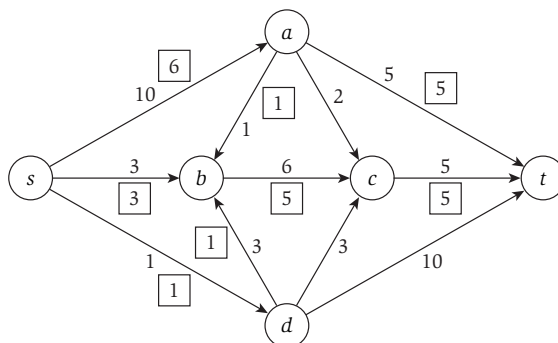
(a)



(b)

1. List all the minimum s-t cuts in flow network (a) above. The capacity of each edge appears as a label next to the edge.
2. What is the minimum capacity of an s-t cut in flow network (b) above? Again, the capacity of each edge appears as a label next to the edge.

**Problem 2. (10 points)** K&T Chapter 7, Exercise 3. The following figure shows a flow network on which an s-t flow has been computed. The capacity of each edge appears as a label next to the edge, and the numbers in boxes give the amount of flow sent on each edge. (Edges without boxed numbers have no flow being sent on them.)



1. What is the value of the flow? Is this a maximum (s,t) flow in this graph?
2. Find a minimum s-t cut and also say what its capacity is.