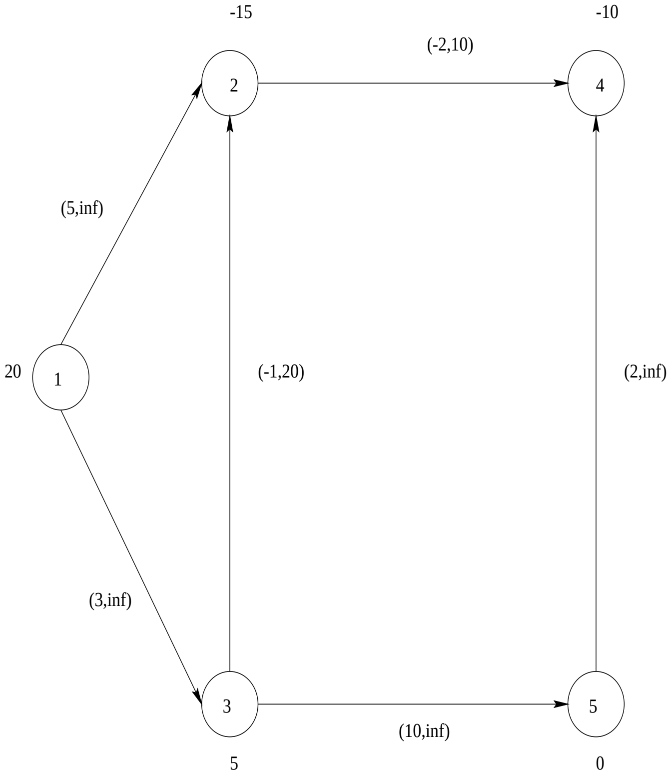
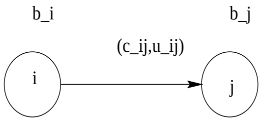
Homework 2*

CS 719, Semester II, 1996-97

Friday January 31, 1997





1. Suppose that the arcs (1,2) and (3,5) have lower bounds equal to $l_{12} = l_{35} = 5$. Transform this problem to one where all the arcs have zero lower bounds.
2. Some arcs have finite capacities. Transform this problem to one where all arcs are uncapacitated.
3. Note that some arcs have negative costs. By reversing the arcs appropriately, transform this problem to one which has all nonnegative arc costs. Write down the node arc incidence matix for the transformed problem.
4. Construct the residual network for the problem with respect to the following flow: $x_{12} = x_{13} = x_{32} = 10$ and $x_{24} = x_{35} = x_{54} = 5$.

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*Homework due in class one week after assigned. No late homework accepted.