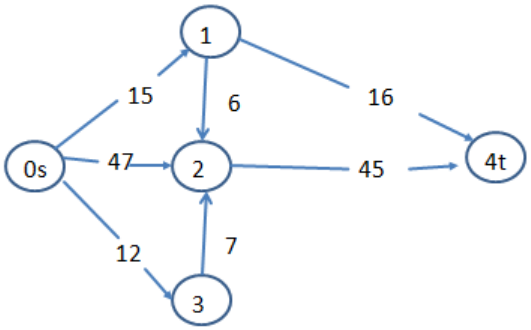
COS226 Maxflow Activity

1. Write the augmenting paths and determine the min-cut of the following FlowNetwork. Edges are labeled with their maximum capacity. Assume ascending order to break ties.



2. Can the min-cut have vertices that are reached by backwards edges?

3. Use the table (from the assignment) below to determine if Philadelphia is already eliminated from the division. Draw the FlowNetwork and then calculate the augmenting paths of the Ford-Fulkerson algorithm.

		w[i]	l[i]	r[i]	g[i][j]			
i	team	wins	loss	left	Atl	Phi	NY	Mon
0	Atlanta	83	71	8	-	1	6	1
1	Philadelphia	80	79	3	1	-	0	2
2	New York	78	78	6	6	0	-	0
3	Montreal	77	82	3	1	2	0	-

4. Then determine if Montreal is eliminated? Is a graph needed? Why or why not?

5. How many game vertices are needed (at most) if there are N teams (meaning N-1 teams in the flow network)?