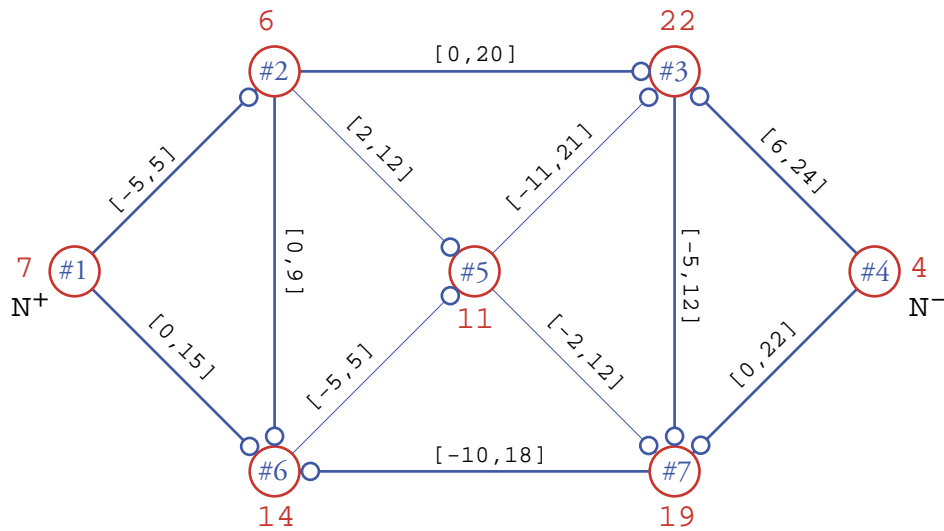


Practice with the Min Path Algorithm

Use the min path algorithm to solve the min path problem and to find a solution to the max tension problem. A feasible potential has been provided.

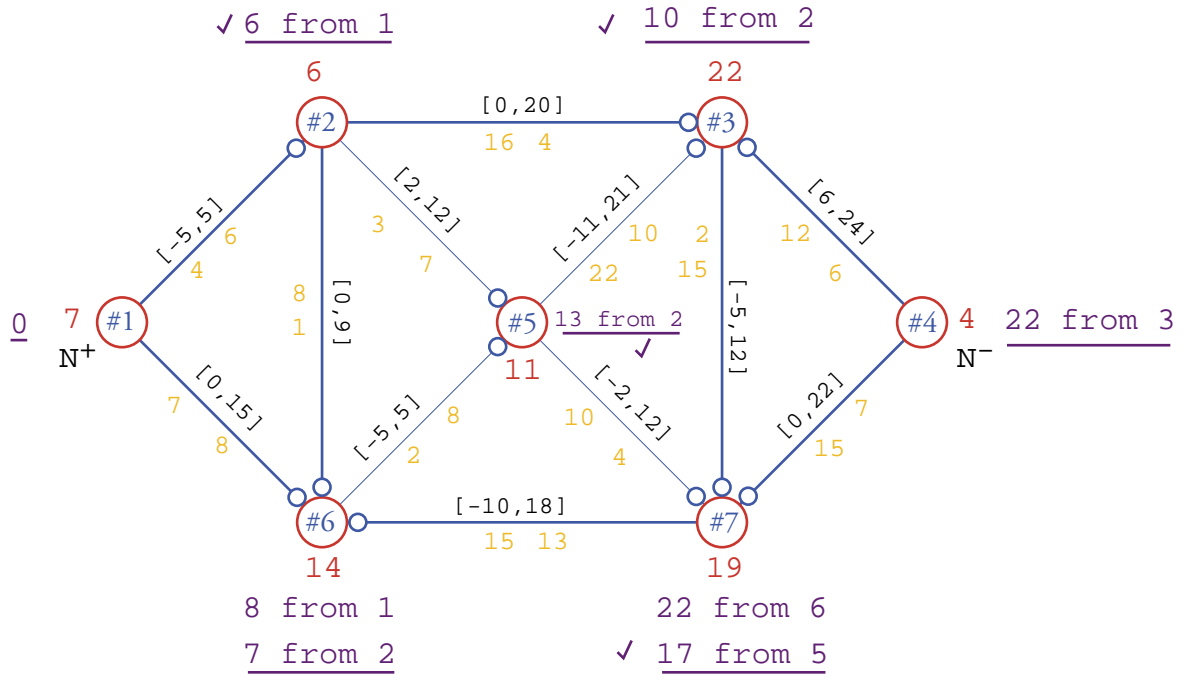


After you finish this problem, if you want more practice, you can make up some problems of your own. Here's how to make up a problem.

Write down a directed network. Choose sets N^+ and N^- . Assign arbitrary numbers to the nodes to form a potential. Make up arc capacities for all the arcs in such a way that your potential will be feasible.

Now you are ready to go. When you are done, make sure that min in the min path problem is equal to the sup in the max tension problem.

Solution by Dijkstra's variation of the Min Path Algorithm



Nodes are added to S (underlined) in this order:

#1, #2, #6, #3, #5, #7, #4

The max in the max tension problem is $26-7=19$.

The min path is #1 -> #2 -> #3 -> #4, which has upper span = $5+20-6 = 19$.