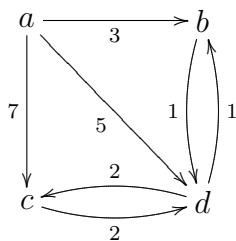Suppose in the following network node a represents a farm of wind turbines with generating capacity of 100MW and b, c and d are villages which they must supply. There is demand of 30MW in each village. The numbers given indicate the cost in dollars per MW of transporting electricity along each line.

There is a capacity of 20MW on each line that runs between two villages (the lines which emanate from the turbines have such great capacity as to be essentially unbounded).

1. Convert the above network flow problem into an unbounded network flow problem.

2. Solve the resulting problem.