4. The links are labeled in units of capacity. For example, link (1-3) has 8 units of capacity. Compute the rate in each flow that results in maximum fair rate allocation under the following assumptions:

i) there is no guaranteed bandwidth for each flow

ii) the guaranteed bandwidth for A and E are 4 and 2 units, respectively. In this case, the left-over capacity is shared among all flows.

b) Indicate the bottleneck link(s) for each flow.