# The Algorithm

1. add a sink node
2. direct one edge from each of the two old sinks to
3. recall that
4. let (i.e. sum of capacities of all edges going into the two sinks)
5. let
6. let (e.g. when , when )
7. make the capacities of each of the two new directed edges we made in step 3
8. run the Ford-Fulkerson algorithm on this new graph with source (the old source) and sink .
9. Flow on edges and are the fair flows.

# Proof of Correctness