1. Consider running network flow on the graph with the following capacities:

![Graph](image)

We currently have flow

![Flow Graph](image)

(a) Draw the residual graph.

![Residual Graph](image)

(b) Draw the shortest augmenting path.

![Augmenting Path](image)

(c) Draw the residual graph in the next round.

![Next Round Graph](image)
2. (a) Similar to problem 1, draw out every step of the Ford-Fulkerson max flow algorithm when run on the following graph, when choosing the maximum capacity augmenting path in each iteration:

(b) What is the corresponding cut?