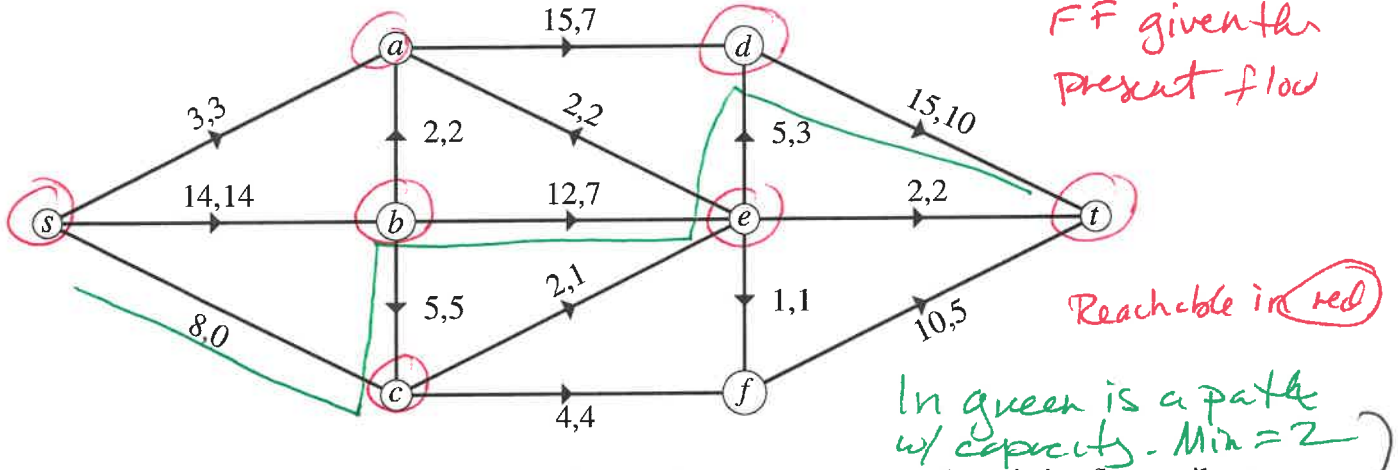
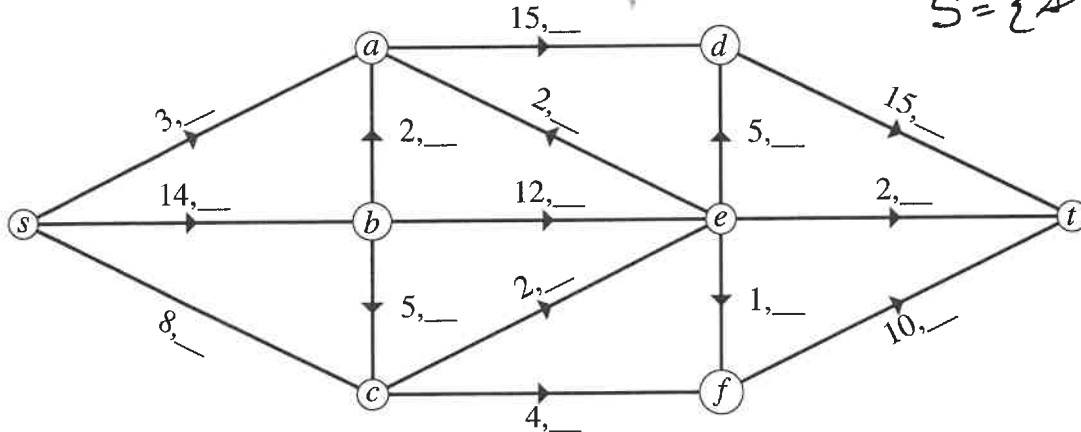
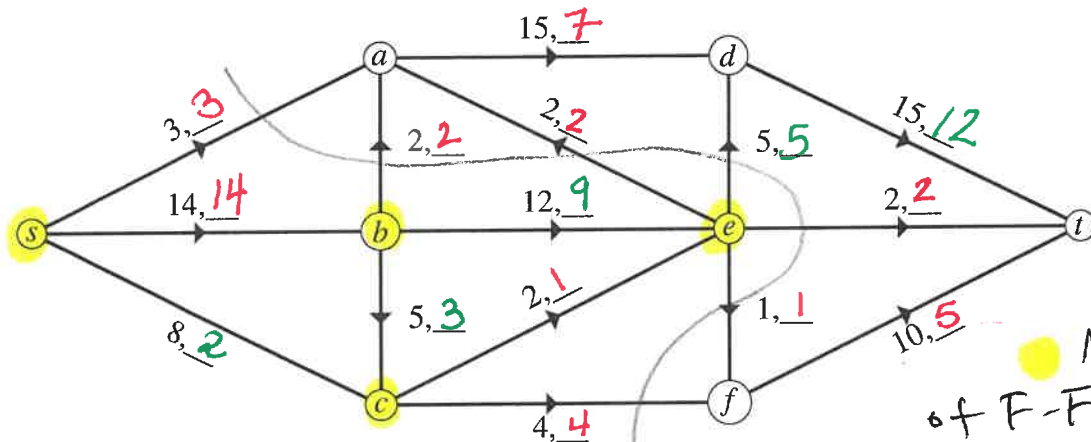


6. In the network below, the capacity and flow value for each edge are represented with an ordered pair: (capacity, flow). Assume the capacity of every edge is the same regardless of direction. (So $c(sa) = c(as) = 3$.) Assume the arrows indicate the direction of positive flow. (So, $f(sa) = 3$ and $f(as) = -3$.)



Use the iterative process from the Ford-Fulkerson Theorem to augment the existing flow until a maximum flow is obtained. You can illustrate your iterative process using the figure(s) below. Demonstrate that your flow has maximum value by finding an appropriate vertex cut S .



$$|f| = 3 + 14 + 2 = 19$$

$$c(s, \bar{S}) = 3 + 2 + 2 + 5 + 2 + 1 + 4 = 19$$