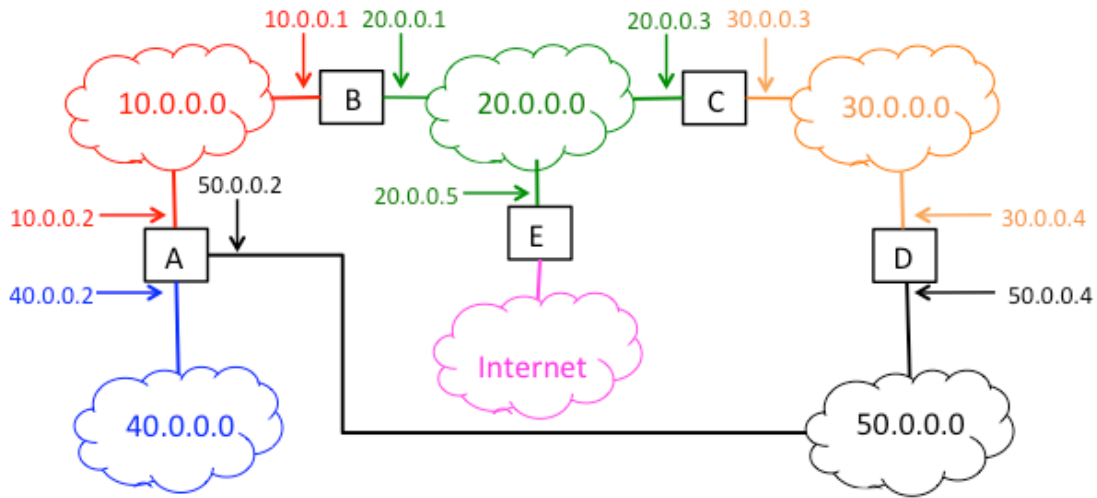


1. (24 Points) Show the routing tables for routers A, B, C, and D. Make sure you account for traffic to the Internet.



	Router A	Router B	Router C	Router D
Network	Next Hop	Next Hop	Next Hop	Next Hop
10.0.0.0 /8	DIRECT	DIRECT	20.0.0.1	50.0.0.2
20.0.0.0 /8	10.0.0.1	DIRECT	DIRECT	30.0.0.3
30.0.0.0 /8	50.0.0.4	20.0.0.3	DIRECT	DIRECT
40.0.0.0 /8	DIRECT	10.0.0.2	20.0.0.1	50.0.0.2
50.0.0.0 /8	DIRECT	10.0.0.2	30.0.0.4	DIRECT
Default	10.0.0.1	20.0.0.5	20.0.0.5	30.0.0.3

2. (20 Points) Explain how the ARP Protocol works. What problem does it solve? How does it solve the problem? Give examples and be as specific as possible.
3. (25 Points) Explain fragmentation as it relates to datagrams. Why is it necessary? Where does it occur? When, where, and how are the fragments reassembled? Give examples and be as specific as possible.