1: Routing & Forwarding

Consider the network shown below.

A. Show the distance table that would be computed by the distance vector algorithm in B once the distance vector algorithm has finished executing. Note: you do not have to run the distance vector algorithm; you should be able to compute the table by inspection. Note: make sure you have a row in the distance table for each neighbor of B.

B. Show the operation of Dijkstra’s (Link State) algorithm for computing the least cost path from B to all destinations

2: Addressing

A. Consider an Internet address of the form 128.119.40.0/23. What does the /23 signify?

B. Consider the network shown above, consisting of a single router, R1, with three subnets A, B...
and C, with 15, 12, and 45 hosts respectively on these subnets.

Assign an address range to the hosts in subnets A, B, and C such that only a single aggregated address need be advertised by R1 to the public Internet, and that the size of the aggregated