

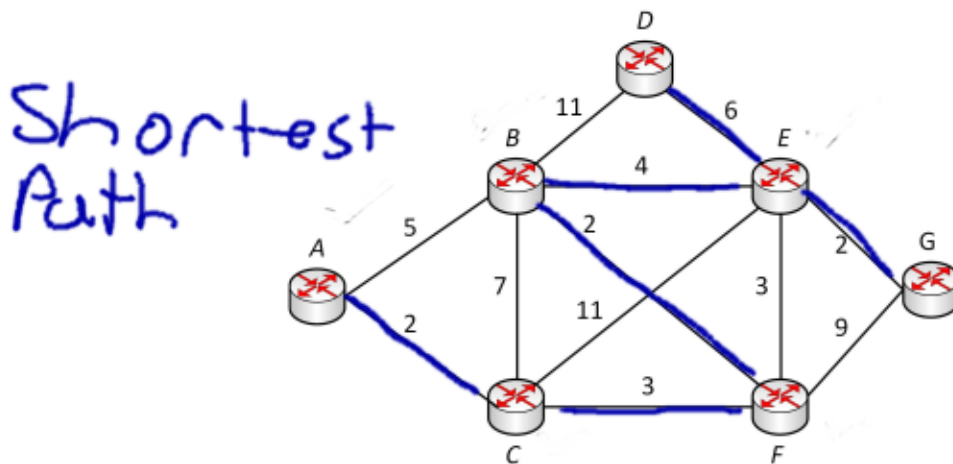
- (b) Show the routing table of node *E* after one iteration of the algorithm, i.e., every node sends its distance vector to its neighbor

Destination	Cost	Next Hop
A	24	D
B	9	B
C	21	B
D	13	B

- (c) Show the routing table of node *E* after two iterations of the algorithm

Destination	Cost	Next Hop
A	14	A
B	9	B
C	11	C
D	13	D

**Problem 12 [15 Points]:** Consider the following network. With the indicated link costs, use Dijkstra's shortest-path algorithm to compute the shortest path from *A* to all network nodes. Show how the algorithm works by computing the table below.



Step	$N'$	$D(B), p(B)$	$D(C), p(C)$	$D(D), p(D)$	$D(E), p(E)$	$D(F), p(F)$	$D(G), p(G)$
1	A	10 A	2 A	-	-	-	-
2	A, C	9 C	-	-	-	5 C	14 F
3	A, C, F	7 F	-	-	8 F	-	-
4	A, C, F, B	-	-	18 F	12 F	-	-
5	A, C, F, B, E	-	-	17 E	-	-	13 F
6							
7							
8							