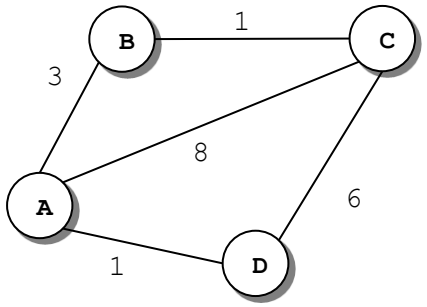
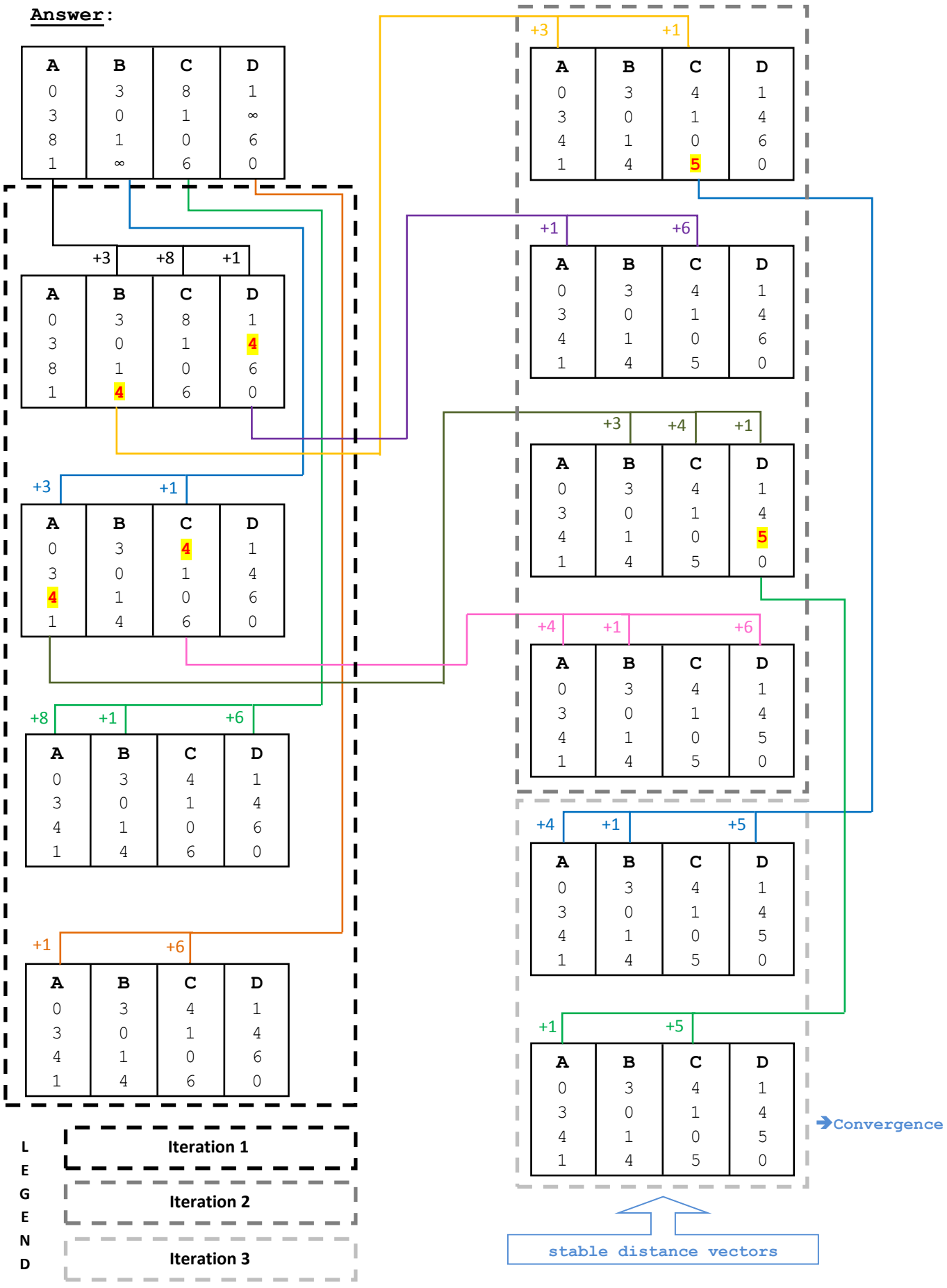
Example:

Apply the distance-vector routing algorithm to the network shown below and determine the stable distance vector for each node after convergence. Show all intermediate steps and provide a summary of your answer.



Answer:


A B C D
0 3 8 1
3 0 1 ∞
8 1 0 6
1 ∞ 6 0
+3 +8 +1
A B C D
0 3 8 1
3 0 1 4
8 1 0 6
1 4 6 0
+3 +1
A B C D
0 3 4 1
3 0 1 4
4 1 0 6
1 4 6 0
+8 +1 +6
A B C D
0 3 4 1
3 0 1 4
4 1 0 6
1 4 6 0
+1 +6
A B C D
0 3 4 1
3 0 1 4
4 1 0 6
1 4 6 0
+3 +1
A B C D
0 3 4 1
3 0 1 4
4 1 0 5
1 4 5 0
+1 +6
A B C D
0 3 4 1
3 0 1 4
4 1 0 5
1 4 5 0
+3 +4 +1
A B C D
0 3 4 1
3 0 1 4
4 1 0 5
1 4 5 0
+4 +1 +6
A B C D
0 3 4 1
3 0 1 4
4 1 0 5
1 4 5 0
+4 +1 +5
A B C D
0 3 4 1
3 0 1 4
4 1 0 5
1 4 5 0
+1 +5
A B C D
0 3 4 1
3 0 1 4
4 1 0 5
1 4 5 0
Convergence
stable distance vectors
LEGEND
Iteration 1
Iteration 2
Iteration 3