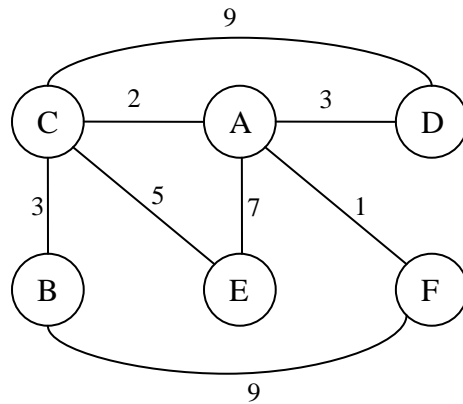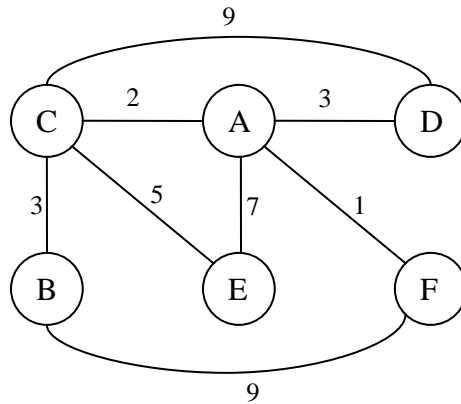# Practice with Graphs

Use the following graph to answer the questions below.

1. Give the order in which the nodes of this graph would be visited in performing a **Breadth First Search** starting at vertex **A**. When more than one choice can be made, pick nodes to visit using alphabetical order.

2. Give the order in which the nodes of this graph would be visited in performing a **Depth First Search (DFS)** starting at vertex **A**. When more than one choice can be made, pick nodes to visit using alphabetical order.

MORE ON BACK PAGE!!

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C — 2 — A — 3 — D

3   5   7   1

B   E   F

9

3. Apply Dijkstra's algorithm using **C** as the starting (source) node. Indicate the cost/distance and predecessor for each node in the graph after processing 2 nodes.

Starting table (filled in for you):

Node	A	B	C	D	E	F
Cost	∞	∞	0	∞	∞	∞
Predecessor	-	-	C	-	-	-

FILL IN THE TABLES BELOW FOR PROCESSING TWO SUCCESSIVE NODES. (You will need to copy many of the entries from the preceding table.)

After processing first node:

Node	A	B	C	D	E	F
Cost						
Predecessor						

After processing second node:

Node	A	B	C	D	E	F
Cost						
Predecessor						