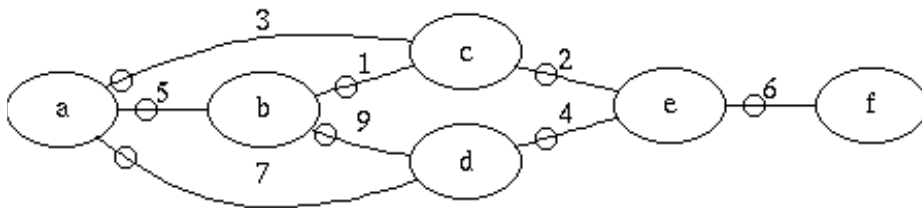


CS200 Quiz 10: More Graphs (11/20/08)

1. [Circle one] A graph traversal algorithm stops when:
 - a. it first encounters the designated destination vertex
 - b. it has visited all the vertices that it can reach*
 - c. it has visited all the vertices
 - d. it has visited all the vertices and returned to the starting vertex
2. [Circle one] An adjacency matrix implementation of a graph:
 - a. can only be used for sparse matrices.
 - b. requires only a 2-D array.
 - c. is less efficient for determining whether an edge exists between 2 vertices.
 - d. puts a 1 or a weight in an entry to indicate the edge between two vertices.*



3. [Circle one] For the graph “above”, Dijkstra’s would expand the nodes as:
 - a. a,c,b,d,e,f
 - b. a,b,c,e,f,d
 - c. a,b,c,d,e,f
 - d. a,c,b,e,d,f*
4. [Circle all that are true] The DFS algorithm
 - a. uses a stack.*
 - b. must be iterative.
 - c. backtracks after all vertices adjacent to the current one have been visited.*
 - d. requires an undirected graph.
5. [Circle all that are true] Dijkstra’s algorithm
 - a. has worst case complexity of $O(v^e)$
 - b. requires a graph with non-negative edge weights.*
 - c. can use a priority queue to keep track of the next vertex to visit.*
 - d. updates the distance to a vertex when it finds an alternate, cheaper path.*