

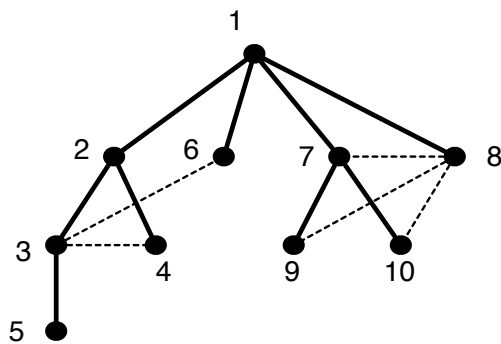
► **Problem DM-6.9-12(c)(d)** Let the graph G be given by the following adjacency list:

Vertices	List of Adjacencies
1	2 6 7 8
2	1 3 4
3	2 4 5 6
4	2 3
5	3
6	1 3
7	1 8 9 10
8	1 7 9 10
9	7 8
10	7 8

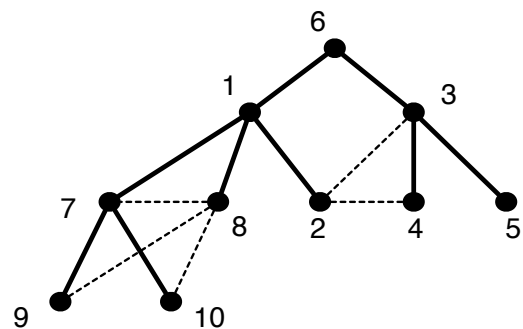
Draw the breadth first search tree that results from the following:

- (a) A breadth first search on G beginning at vertex 1.
- (b) A breadth first search on G beginning at vertex 6.

Solution.



DFS on G beginning at vertex 1
visited ordering: 1 2 6 7 8 3 4 9 10 5



DFS on G beginning at vertex 6
visited ordering: 6 1 3 2 7 8 4 5 9 10

□