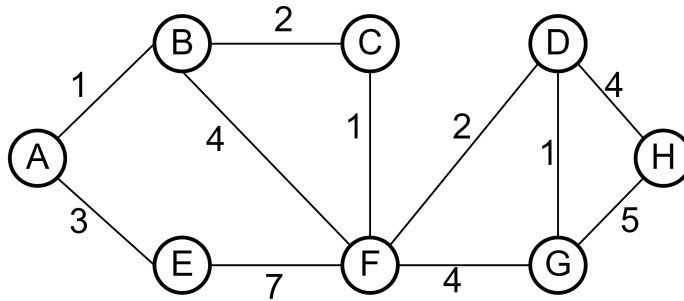


DFS, BFS, Dijkstra's, A*

For the following questions, use the graph below and assume that we break ties by visiting lexicographically earlier nodes first.



- Give the depth first search preorder traversal starting from vertex A .
- Give the depth first search postorder traversal starting from vertex A .
- Give the breadth first search traversal starting from vertex A .
- Give the order in which Dijkstra's Algorithm would visit each vertex, starting from vertex A . Sketch the resulting shortest paths tree.
- Give the path A* search would return, starting from A and with G as a goal.

Let $h(u, v)$ be the value returned by the heuristic for nodes u and v .

u	v	$h(u, v)$
A	G	9
B	G	7
C	G	4
D	G	1
E	G	10
F	G	3
H	G	5