

## Homework 1

- 1.) The Nodes listed in Breadth First Search goes as follows.

S -> A | S->B

S-> A-> C | S-> A-> D | S-> B -> E | S-> B -> G(2)

The cost of the solution path from start to finish is 16, after traversing to node B and gaining 7 and node G(2) and gaining 9.

The solution path, S-> B -> G(2), only travels across 2 nodes to find a goal making the total number of hops 2.

- 2.) The Nodes listed in Depth First Search goes as follows.

S-> A-> C-> D-> B-> E-> G(2)

The DFS solution path, S-> A-> C-> D-> B-> E-> G(2), results in 17 points be gained.

S-> A-> C-> D-> B-> E-> G(2) travels across 6 nodes to find a goal making the total number of hops 6.

- 3.) The Nodes listed in Uniform-Cost Search goes as follows in finding the first goal.

S-> B-> E-> G

The cost of the UCS solution is 13 points.

UCS solution only takes 3 hops to complete.

Key:  
Cost: 1  
Total Cost: 1  
Path Taken: 1

