Ethan Grantz EECS 560 Lab 10 report

1. Prim's is better for a dense graph, because you do not have to check for loops every iteration, as that's handled by what we put in the queue. We only insert edges to vertices not already visited.

2. BFS could be used to implement a simple GPS. Every location would be a vertex, a roads between them would be edges. It would just continue the BFS starting from the starting location until it found the destination vertex, then give you the path it found. This of course would be a very poor quality GPS due to other factors like speed limit, but it works nonetheless.

3. A maze is just a giant graph, with each hallway being an edge, and each intersection being a vertex. Due to DFS's built in backtracking, a ability to avoid already visited vertices, it could solve a maze by just diving as deep into a maze as it could until it found the exit.