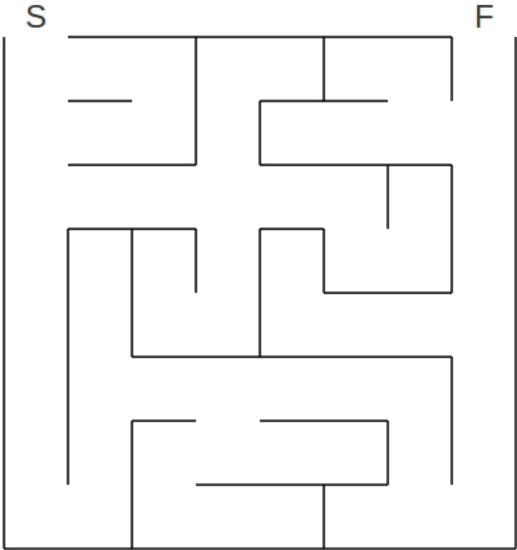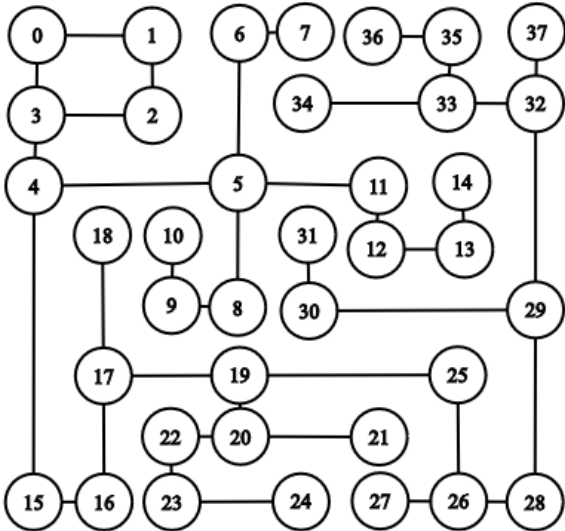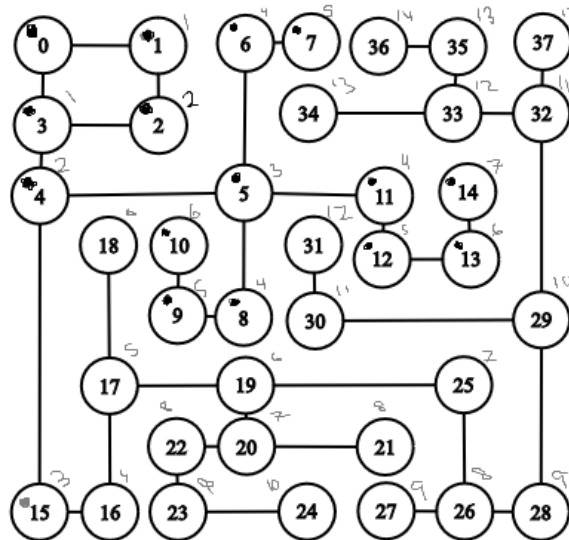# Maze Worksheet

Consider the following maze:

Show how to model the maze as a graph.

Each intersection of the maze could be represented as a vertex and the routes between them as edges. This would allow you to use the BFS and DFS algorithms to find the solution.

Perform a breadth-first search on the maze to show how this algorithm can be used to find the shortest path from start to finish.

The shortest path takes 12 hops and is as follows:

$$0 \rightarrow 3 \rightarrow 4 \rightarrow 15 \rightarrow 16 \rightarrow 17 \rightarrow 19 \rightarrow 25 \rightarrow 26 \rightarrow 28 \rightarrow 29 \rightarrow 32 \rightarrow 37$$