Sample Maze

"XXXXXXXXXX",

"X........X",

"XX.X.XXXXX",

"X..X.X...X",

"X..X...X.X",

"XXXX.XXX.X",

"X.X....XXX",

"X..XX.XX.X",

"X...X....X",

"XXXXXXXXXX"

Question 2

First (6, 4), (6, 3), (6, 5), (7, 5), (8, 5), (8, 6), (8, 7), (8, 8), (7, 8), (6, 6), (5, 4), (4, 4) Last

Sample Maze

"XXXXXXXXXX",

"X........X",

"XX.X-XXXXX",

"X..X-X...X",

"X..X--.X.X",

"XXXX-XXX.X",

"X.X----XXX",

"X..XX-XX.X",

"X...X-...X",

"XXXXXXXXXX"

Question 4

First (6, 4), (5, 4), (6, 5), (6, 3), (4, 4), (6, 6), (7, 5), (3, 4), (4, 5), (8, 5), (2, 4), (4, 6) Last

The stack operates in a depth search in which it will transverse one direction until the end and move backwards to search the next closest “branch” it skipped over. This is implemented by a first in last out method. The queue instead does a breadth search in which it has a first in first out method. This means all of the coordinates that it collects will be evaluated and further points gathered based upon the order in which they were added to the stack. This functions similarly to a ripple in a pool checking points closest to the origin first and moving out in concentric circles.