2.

STACK first 12 coord (r,c) popped

(6,4)

(6,3)

(6,5)

(7,5)

(8,5)

(8,6)

(8,7)

(8,8)

(7,8)

(6,6)

(5,4)

(4,4)

4.

QUEUE First 12 coord (r, c) popped :

(6,4)

(5,4)

(6,5)

(6,3)

(4,4)

(6,6)

(7,5)

(3,4)

(4,5)

(8,5)

(2,4)

(4,6)

The two algorithms differ from each other because by using a stack, coordinates are added to the top of the stack when they are pushed and then they’re also popped from the top of the stack (last in, first out). Using a queue, coordinates are added to the rear, but they are popped from the front (first in, first out).

Stack will visit cells that were pushed onto the stack most recently –the cells that are closest to the most recently popped coord. On the other hand, queue will visit the oldest cells that were pushed onto the stack.

Thus, a queue will explore squares closest to the starting square first before exploring squares further away-- so it searches breadth-wise—whereas, a stack will go deep into the maze in one path before hitting a dead end and exploring other paths-- so it searches depth-first.