2. First 12 (r,c) coordinates popped off the stack:

(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. First 12 (r,c) coordinates popped off the queue:

(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 in that one makes use of a stack, which operates by a “last in, first out” principle, while the other makes use of a queue, which operates by a “first in, first out” principle. This makes it so that the algorithm using the stack will search by travelling down one path from the starting point, then branches on that path, and if finding only dead ends, the algorithm will start travelling down another path from the starting point. On the other hand, the algorithm using the queue will search all adjacent cells first (rather than following one down), and then the cells adjacent to those, and so on so forth. Instead of picking one path and exhausting it before going down the next, the queue algorithm searches all the paths at the same time.