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Homework #2

Problem 2:

**(3,5), (3,6), (3,4), (2,4), (1,4), (1,3), (1,2), (1,1), (2,1), (3,3), (4,5), (5,5)**

**(5,4), (5,3), (6,3), (6,2), (6,1), (5,1), (4,1), (6,5)**

**(7,5)**

**(8,5)**

**(8,6)**

**(8,7)**

**(8,8)**

Problem 4:

**(3,5), (4,5), (3,4), (3,6), (5,5), (3,3), (2,4), (6,5), (5,4), (1,4), (7,5), (5,3)**

The difference in the two algorithms is that the maze stack searches in a depth-first order, while the maze queue searches in a breadth-first order. In the stack, when we hit a dead end, we backtrack to the closest intersection that still has directions that have not been traveled in, which indicate potential solutions. The cell that is selected to visit next will be adjacent to the most recently visited cell that has a potential route to the finish. In the queue, we visit cells starting at 1 position away, and then 2, and then so on, until we find a path that connects the beginning to the end

**(1,3)**

**(8,5)**

**(6,3)**

**(1,2)**

**(8,4)**

**(8,6)**

**(6,2)**

**(1,1)**

**(8,3)**

**(8,7)**

**(6,1)**

**(2,1)**

**(8,2)**

**(7,7)**

**(8,8)**