Name: $\qquad$

## COP 3502H

## Backtracking Quiz

1) a) Use backtracking to get out of the following maze shown below. Your goal is to start at the S and end at the square marked F. You are not allowed to go to squares marked with X's. Show all paths attempted, and number each point you had to backtrack starting with 1 . Any time you are given a choice of paths, take them in the following order: UP, RIGHT, DOWN, LEFT. (These are the only four directions you can move.) Also, remember not to go to squares you have previously traversed.

| S |  |  |  | X |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | X | X |  |  |  | X | X | X | X |
|  | X | X | X | X |  |  |  |  |  |
|  | X | X |  | X |  | X | X | X | X |
|  | X | X |  | X |  | X | X | X |  |
|  |  |  | X |  |  | X | X | X |  |
|  | X | X | X | X | X | X | X | X |  |
|  |  |  |  |  | X | X |  | X |  |
|  | X |  | X |  | X | X |  | X |  |
|  | X |  | X |  |  |  |  |  | F |

b) How many times did you have to backtrack?

