Bomberman

Bomberman wants to get home as fast as possible after finishing his shift in the game saloon. There is an exit door in the level he is in but there are some boxes in his way. Bomberman has limited bomb and wants to get to the exit door with m bomb or less. Help him to find the exit door with minimum number of steps by using at most m bombs.

Explosion effect of bombs are 1 cell up, down, left and right.

Bomberman can't move diagonally.

Input Format:

First line;

n- edge length of square shaped level,

m- bomb count,

ri,ci- initial coordinates,

rf,cf- exit coordinates.

Next n line;

n piece of "x"(boxes) or "."(empty).

Constraints:

0 < n <= 250
0 <= m <= 150
0 <= ri, ci, rf, cf < n

Output Format:

Print the minimum number of steps, print "Impossible" if Bomberman can't get to the exit.

Sample Input 0:

5 2 0 0 0 4

.xxx.

.xxx.

..xxx

.x.x.

...xx

Sample Output 0:

12

Sample Input 1:

5 2 0 0 0 4

.xxx.

.xxx.

..xxx

.xxx.

...xx

Sample Output 1:

Impossible

Explanation 0:

He will start at (0,0) point and go to (4,0) point.