Daily Coding Problem

Good morning! Here's your coding interview problem for today.

This problem was asked by Facebook.

There is an N by M matrix of zeroes. Given N and M, write a function to count the number of ways of starting at the top-left corner and getting to the bottom-right corner. You can only move right or down.

For example, given a 2 by 2 matrix, you should return 2, since there are two ways to get to the bottom-right:

- Right, then down
- Down, then right

Given a 5 by 5 matrix, there are 70 ways to get to the bottom-right.

I have chosen this exercise since in the following grid arrangement:

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

My code has identified these under following constraints

Test case:

C(8,r) from r=2 (smallest move) to r=8 (largest move)
nums[1,2,3,4]
Executed for
}while (cycles<combinations*10);

****OUTPUT**********

98 unique combinations

Test case:

C(8,r) from r=2 (smallest move) to r=8 (largest move)
nums[1,2,3,4]
Executed for
}while (cycles<combinations*100);

****OUTPUT**********

107 unique combinations

Test case:

C(8,r) from r=2 (smallest move) to r=8 (largest move)
nums[1,2,3,4]
Executed for
}while (cycles<combinations*1000);

****OUTPUT**********

108 unique combinations

Test case:

C(8,r) from r=2 (smallest move) to r=8 (largest move)
nums[1,2,3,4]
Executed for
}while (cycles<combinations*100000);

****OUTPUT**********

108 unique combinations

I am now satisfied with 108 unique combinations... It is now a case of eliminating to get the figure in line with 70 ways.
Already at this point, I have a feeling of alternating right and down might not be valid.. But since it's a small result set, it can be readily tested.
Also if the functional results, does tally with the 70, I can embed logic directly of traversing the 5x5 grid within the number generation process.

4,4 Subset: 1 at cycle number: 1500000 **(FUNCTIONAL BOTH DIRECTIONS)**

3,4,1 Subset: 2 at cycle number: 3500000 **(FUNCTIONAL BOTH DIRECTIONS)**

3,2,3 Subset: 3 at cycle number: 3500000 (NON-FUNCTIONAL BOTH SCENARIOS).

3,1,4 Subset: 4 at cycle number: 3500000 (NON-FUNCTIONAL BOTH SCENARIOS).

3,3,2 Subset: 5 at cycle number: 3500000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,3,4 Subset: 6 at cycle number: 3500000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,4,3 Subset: 7 at cycle number: 3500000 **(FUNCTIONAL BOTH DIRECTIONS)**

4,1,3 Subset: 8 at cycle number: 3500000 (NON-FUNCTIONAL BOTH SCENARIOS).

4,3,1 Subset: 9 at cycle number: 3500000 (NON-FUNCTIONAL BOTH SCENARIOS).

4,2,2 Subset: 10 at cycle number: 3500000 (NON-FUNCTIONAL BOTH SCENARIOS).

2,2,4 Subset: 11 at cycle number: 3500000 (NON-FUNCTIONAL BOTH SCENARIOS).

2,4,2 Subset: 12 at cycle number: 3500000 **(FUNCTIONAL BOTH DIRECTIONS)**

2,3,3 Subset: 13 at cycle number: 3500000 (NON-FUNCTIONAL BOTH SCENARIOS).

3,2,1,2 Subset: 14 at cycle number: 7000000 **(FUNCTIONAL BOTH DIRECTIONS)**

3,2,2,1 Subset: 15 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,3,1,3 Subset: 16 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,3,3,1 Subset: 17 at cycle number: 7000000 **(FUNCTIONAL BOTH DIRECTIONS)**

1,3,2,2 Subset: 18 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

2,1,2,3 Subset: 19 at cycle number: 7000000 **(FUNCTIONAL BOTH DIRECTIONS)**

2,1,4,1 Subset: 20 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

2,1,1,4 Subset: 21 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

2,1,3,2 Subset: 22 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

3,3,1,1 Subset: 23 at cycle number: 7000000 **(FUNCTIONAL BOTH DIRECTIONS)**

1,4,1,2 Subset: 24 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,4,2,1 Subset: 25 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

4,1,1,2 Subset: 26 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

4,1,2,1 Subset: 27 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

2,2,3,1 Subset: 28 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

2,2,2,2 Subset: 29 at cycle number: 7000000 **(FUNCTIONAL BOTH DIRECTIONS)**

2,2,1,3 Subset: 30 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,1,3,3 Subset: 31 at cycle number: 7000000 **(FUNCTIONAL BOTH DIRECTIONS)**

1,1,2,4 Subset: 32 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,1,4,2 Subset: 33 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

4,2,1,1 Subset: 34 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

2,3,2,1 Subset: 35 at cycle number: 7000000 **(FUNCTIONAL BOTH DIRECTIONS)**

2,3,1,2 Subset: 36 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

2,4,1,1 Subset: 37 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

3,1,1,3 Subset: 38 at cycle number: 7000000 **(FUNCTIONAL BOTH DIRECTIONS)**

3,1,2,2 Subset: 39 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

3,1,3,1 Subset: 40 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,2,3,2 Subset: 41 at cycle number: 7000000 **(FUNCTIONAL BOTH DIRECTIONS)**

1,2,4,1 Subset: 42 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,2,2,3 Subset: 43 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,2,1,4 Subset: 44 at cycle number: 7000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,1,2,1,3 Subset: 45 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,1,2,3,1 Subset: 46 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

2,3,1,1,1 Subset: 47 at cycle number: 12600000 **(FUNCTIONAL BOTH DIRECTIONS)**

2,1,2,2,1 Subset: 48 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

3,1,1,1,2 Subset: 49 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,3,1,2,1 Subset: 50 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

3,1,2,1,1 Subset: 51 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,1,3,1,2 Subset: 52 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

3,2,1,1,1 Subset: 53 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,2,2,1,2 Subset: 54 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,2,1,3,1 Subset: 55 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,2,1,1,3 Subset: 56 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,1,4,1,1 Subset: 57 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

2,2,1,2,1 Subset: 58 at cycle number: 12600000 **(FUNCTIONAL BOTH DIRECTIONS)**

1,1,1,4,1 Subset: 59 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,1,1,2,3 Subset: 60 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,2,3,1,1 Subset: 61 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

2,1,1,3,1 Subset: 62 at cycle number: 12600000 **(FUNCTIONAL BOTH DIRECTIONS)**

2,1,1,1,3 Subset: 63 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,1,2,2,2 Subset: 64 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

4,1,1,1,1 Subset: 65 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

2,1,2,1,2 Subset: 66 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

3,1,1,2,1 Subset: 67 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,3,1,1,2 Subset: 68 at cycle number: 12600000 **(FUNCTIONAL BOTH DIRECTIONS)**

2,1,3,1,1 Subset: 69 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,3,2,1,1 Subset: 70 at cycle number: 12600000 **(FUNCTIONAL BOTH DIRECTIONS)**

1,1,3,2,1 Subset: 71 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,4,1,1,1 Subset: 72 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,2,2,2,1 Subset: 73 at cycle number: 12600000 **(FUNCTIONAL BOTH DIRECTIONS)**

1,2,1,2,2 Subset: 74 at cycle number: 12600000 **(FUNCTIONAL BOTH DIRECTIONS)**

2,2,1,1,2 Subset: 75 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,1,1,3,2 Subset: 76 at cycle number: 12600000 **(FUNCTIONAL BOTH DIRECTIONS)**

1,1,1,1,4 Subset: 77 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

2,1,1,2,2 Subset: 78 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

2,2,2,1,1 Subset: 79 at cycle number: 12600000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,2,2,1,1,1 Subset: 80 at cycle number: 21000000 **(FUNCTIONAL BOTH DIRECTIONS)**

1,1,2,1,2,1 Subset: 81 at cycle number: 21000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,1,1,1,1,3 Subset: 82 at cycle number: 21000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,1,1,3,1,1 Subset: 83 at cycle number: 21000000 **(FUNCTIONAL BOTH DIRECTIONS)**

1,1,2,1,1,2 Subset: 84 at cycle number: 21000000 **(FUNCTIONAL BOTH DIRECTIONS)**

2,1,1,2,1,1 Subset: 85 at cycle number: 21000000 **(FUNCTIONAL BOTH DIRECTIONS)**

1,1,3,1,1,1 Subset: 86 at cycle number: 21000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,1,1,2,2,1 Subset: 87 at cycle number: 21000000 **(FUNCTIONAL BOTH DIRECTIONS)**

3,1,1,1,1,1 Subset: 88 at cycle number: 21000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,2,1,1,1,2 Subset: 89 at cycle number: 21000000 (NON-FUNCTIONAL BOTH SCENARIOS).

2,2,1,1,1,1 Subset: 90 at cycle number: 21000000 **(FUNCTIONAL BOTH DIRECTIONS)**

2,1,1,1,2,1 Subset: 91 at cycle number: 21000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,1,1,2,1,2 Subset: 92 at cycle number: 21000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,3,1,1,1,1 Subset: 93 at cycle number: 21000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,2,1,1,2,1 Subset: 94 at cycle number: 21000000 **(FUNCTIONAL BOTH DIRECTIONS)**

1,1,1,1,3,1 Subset: 95 at cycle number: 21000000 (NON-FUNCTIONAL BOTH SCENARIOS).

2,1,1,1,1,2 Subset: 96 at cycle number: 21000000 **(FUNCTIONAL BOTH DIRECTIONS)**

1,1,2,2,1,1 Subset: 97 at cycle number: 21000000 **(FUNCTIONAL BOTH DIRECTIONS)**

2,1,2,1,1,1 Subset: 98 at cycle number: 21000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,1,1,1,2,2 Subset: 99 at cycle number: 21000000 **(FUNCTIONAL BOTH DIRECTIONS)**

1,2,1,2,1,1 Subset: 100 at cycle number: 21000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,1,2,1,1,1,1 Subset: 101 at cycle number: 33000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,1,1,1,2,1,1 Subset: 102 at cycle number: 33000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,1,1,1,1,2,1 Subset: 103 at cycle number: 33000000 **(FUNCTIONAL BOTH DIRECTIONS)**

1,2,1,1,1,1,1 Subset: 104 at cycle number: 33000000 **(FUNCTIONAL BOTH DIRECTIONS)**

1,1,1,1,1,1,2 Subset: 105 at cycle number: 33000000 (NON-FUNCTIONAL BOTH SCENARIOS).

2,1,1,1,1,1,1 Subset: 106 at cycle number: 33000000 (NON-FUNCTIONAL BOTH SCENARIOS).

1,1,1,2,1,1,1 Subset: 107 at cycle number: 33000000 **(FUNCTIONAL BOTH DIRECTIONS)**

1,1,1,1,1,1,1,1 Subset: 108 at cycle number: 49500000 **(FUNCTIONAL BOTH DIRECTIONS)**

As I am moving through these, there seems to be a pattern in which mindset suggests alternation should stop..
For instance I am reaching vertically or horizontally to end point, it feels movement should continue down or right respectively to reach the goal.
But conversely there should be a larger number in the subset which should satisfy this condition at these points.
So it should not require any intervention.

I have reached a count of 30 subsets. And each is viable for:
{right, down, right, down} or {down,right,down,right}

At this moment, I am unsure if issue is with the computation or my checks...
Since I was expecting 35 as per the challenge (each subset having two outcomes).

I have completed checks again and now reached 34. This was due to human error!
So I am a single solution away.

I have finally identified all 35 subsets. This was essential since its good practice where possible to use human intervention to verify the data.

I can now set the software code to perform the movements...
I initially tried with enum but issue was I attempted to overwrite the enum values. It was successful for initial value.
But afterwards it did not allow any modification.
This was partially as expected being a constant.
I also tried to re-instantiate the Direction class (with the enum).
But I could not overwrite the variables:
  static int RIGHTvalue;

```
  static int DOWNvalue;
```

I also contemplated an enumSet so that I could process:
Set<Direction> set1 = EnumSet.of(Direction.UP, Direction.DOWN);
But it could potentially lead similar issues I encountered with general enum approach of assigning new values to the constants at runtime.

So, I opted for traditional enum approach.
But I have left my intended approach uncommented since it does not affect the execution.

****OUTPUT**********

All solutions will be visible as follows:

********DECISION!!!*****************

You are currently at [4][4] on the matrix

****

1,2,1,1,2,1   Subset: 28 at cycle number: 462000

Note: Combination.java uses unchecked or unsafe operations.

Note: Recompile with -Xlint:unchecked for details.

Welcome to Online IDE!! Happy Coding :)

COMBINATIONS (WITH REPLACEMENT)

C^R(n + r) = (n+r-1)! / r!(n-1)!

C^R(5,0) = 4! / 0!(4)!

Combinations: 1

**********INITIAL VALUE OF CYCLES: 0

**********NEW VALUE CYCLES: 1000

**********RUNNING TOTAL CYCLES: 1000

***PROCESSING SET AT INDEX: 0

ENDING AT INDEX:*** 0

There are: 0 possibilities SO FAR

The UP and RIGHT can be inversed along its path for alternate solution

COMBINATIONS (WITH REPLACEMENT)

C^R(n + r) = (n+r-1)! / r!(n-1)!

C^R(5,1) = 5! / 1!(4)!

Combinations: 5

**********INITIAL VALUE OF CYCLES: 0

**********NEW VALUE CYCLES: 5000

**********RUNNING TOTAL CYCLES: 6000

***PROCESSING SET AT INDEX: 0

ENDING AT INDEX:*** 0

There are: 0 possibilities SO FAR

The UP and RIGHT can be inversed along its path for alternate solution

COMBINATIONS (WITH REPLACEMENT)

C^R(n + r) = (n+r-1)! / r!(n-1)!

C^R(5,2) = 6! / 2!(4)!

Combinations: 15

**********INITIAL VALUE OF CYCLES: 0

**********NEW VALUE CYCLES: 15000

**********RUNNING TOTAL CYCLES: 21000

***PROCESSING SET AT INDEX: 0

ENDING AT INDEX:*** 3

{3,5} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [3][0] on the matrix

Performing this movement: (RIGHT): 5

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][0] on the matrix

****

{5,3} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 5

MOVEMENT IS OUT OF BOUNDS

You are currently at [0][0] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

********DECISION!!!**********

You are currently at [0][3] on the matrix

****

{4,4} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 4

Successfully moved 4 downwards

You are currently at [4][0] on the matrix

Performing this movement: (RIGHT): 4

Successfully moved 4 to the right

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

4,4 Subset: 1 at cycle number: 21000

There are: 2 possibilities SO FAR

The UP and RIGHT can be inversed along its path for alternate solution

COMBINATIONS (WITH REPLACEMENT)

C^R(n + r) = (n+r-1)! / r!(n-1)!

C^R(5,3) = 7! / 3!(4)!

Combinations: 35

**********INITIAL VALUE OF CYCLES: 0

**********NEW VALUE CYCLES: 35000

**********RUNNING TOTAL CYCLES: 56000

***PROCESSING SET AT INDEX: 3

ENDING AT INDEX:*** 21

{3,1,4} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [3][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][1] on the matrix

Performing this movement: (DOWN): 4

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][1] on the matrix

****

{3,4,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [3][0] on the matrix

Performing this movement: (RIGHT): 4

Successfully moved 4 to the right

You are currently at [3][4] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

3,4,1 Subset: 2 at cycle number: 56000

{3,3,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [3][0] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [3][3] on the matrix

Performing this movement: (DOWN): 2

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][3] on the matrix

****

{3,2,3} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [3][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [3][2] on the matrix

Performing this movement: (DOWN): 3

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][2] on the matrix

****

{1,4,3} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 4

Successfully moved 4 to the right

You are currently at [1][4] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

1,4,3   Subset: 3 at cycle number: 56000

{1,2,5} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [1][2] on the matrix

Performing this movement: (DOWN): 5

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [1][2] on the matrix

****

{1,5,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 5

MOVEMENT IS OUT OF BOUNDS

You are currently at [1][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

********DECISION!!!**********

You are currently at [3][0] on the matrix

****

{1,3,4} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [1][3] on the matrix

Performing this movement: (DOWN): 4

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [1][3] on the matrix

****

{4,1,3} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 4

Successfully moved 4 downwards

You are currently at [4][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [4][1] on the matrix

Performing this movement: (DOWN): 3

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [4][1] on the matrix

****

{4,2,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 4

Successfully moved 4 downwards

You are currently at [4][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [4][2] on the matrix

Performing this movement: (DOWN): 2

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [4][2] on the matrix

****

{4,3,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 4

Successfully moved 4 downwards

You are currently at [4][0] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [4][3] on the matrix

Performing this movement: (DOWN): 1

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [4][3] on the matrix

****

{2,4,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 4

Successfully moved 4 to the right

You are currently at [2][4] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

2,4,2 Subset: 4 at cycle number: 56000

{2,3,3} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [2][3] on the matrix

Performing this movement: (DOWN): 3

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [2][3] on the matrix

****

{2,2,4} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [2][2] on the matrix

Performing this movement: (DOWN): 4

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [2][2] on the matrix

****

{2,5,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 5

MOVEMENT IS OUT OF BOUNDS

You are currently at [2][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [3][0] on the matrix

****

{2,1,5} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][1] on the matrix

Performing this movement: (DOWN): 5

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [2][1] on the matrix

****

{5,1,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 5

MOVEMENT IS OUT OF BOUNDS

You are currently at [0][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [0][1] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

********DECISION!!!**********

You are currently at [2][1] on the matrix

****

{5,2,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 5

MOVEMENT IS OUT OF BOUNDS

You are currently at [0][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [0][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [1][2] on the matrix

****

There are: 8 possibilities SO FAR

The UP and RIGHT can be inversed along its path for alternate solution

COMBINATIONS (WITH REPLACEMENT)

C^R(n + r) = (n+r-1)! / r!(n-1)!

C^R(5,4) = 8! / 4!(4)!

Combinations: 70

**********INITIAL VALUE OF CYCLES: 0

**********NEW VALUE CYCLES: 70000

**********RUNNING TOTAL CYCLES: 126000

***PROCESSING SET AT INDEX: 21

ENDING AT INDEX:*** 56

{3,2,1,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [3][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [3][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [4][2] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

3,2,1,2 Subset: 5 at cycle number: 126000

{1,3,2,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [1][3] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [3][3] on the matrix

Performing this movement: (RIGHT): 2

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][3] on the matrix

****

{2,1,2,3} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][1] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [4][1] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

2,1,2,3 Subset: 6 at cycle number: 126000

{2,1,4,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][1] on the matrix

Performing this movement: (DOWN): 4

MOVEMENT IS OUT OF BOUNDS

You are currently at [2][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [2][2] on the matrix

****

{3,3,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [3][0] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [3][3] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [4][3] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

3,3,1,1 Subset: 7 at cycle number: 126000

{1,4,2,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 4

Successfully moved 4 to the right

You are currently at [1][4] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [3][4] on the matrix

Performing this movement: (RIGHT): 1

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][4] on the matrix

****

{4,1,1,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 4

Successfully moved 4 downwards

You are currently at [4][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [4][1] on the matrix

Performing this movement: (DOWN): 1

MOVEMENT IS OUT OF BOUNDS

You are currently at [4][1] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

********DECISION!!!**********

You are currently at [4][3] on the matrix

****

{2,2,2,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [2][2] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [4][2] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

2,2,2,2 Subset: 8 at cycle number: 126000

{1,1,1,5} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][1] on the matrix

Performing this movement: (RIGHT): 5

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [2][1] on the matrix

****

{1,1,3,3} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [4][1] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

1,1,3,3 Subset: 9 at cycle number: 126000

{1,1,5,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 5

MOVEMENT IS OUT OF BOUNDS

You are currently at [1][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [1][2] on the matrix

****

{4,2,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 4

Successfully moved 4 downwards

You are currently at [4][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [4][2] on the matrix

Performing this movement: (DOWN): 1

MOVEMENT IS OUT OF BOUNDS

You are currently at [4][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [4][3] on the matrix

****

{2,3,2,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [2][3] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [4][3] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

2,3,2,1 Subset: 10 at cycle number: 126000

{3,1,2,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [3][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][1] on the matrix

Performing this movement: (DOWN): 2

MOVEMENT IS OUT OF BOUNDS

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

********DECISION!!!******************

You are currently at [3][3] on the matrix

****

{1,2,1,4} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [1][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][2] on the matrix

Performing this movement: (RIGHT): 4

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [2][2] on the matrix

****

{1,2,3,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [1][2] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [4][2] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

1,2,3,2 Subset: 11 at cycle number: 126000

{5,1,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 5

MOVEMENT IS OUT OF BOUNDS

You are currently at [0][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [0][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [1][2] on the matrix

****

{3,2,2,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [3][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [3][2] on the matrix

Performing this movement: (DOWN): 2

MOVEMENT IS OUT OF BOUNDS

You are currently at [3][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [3][3] on the matrix

****

{1,3,1,3} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [1][3] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][3] on the matrix

Performing this movement: (RIGHT): 3

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [2][3] on the matrix

****

{1,3,3,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [1][3] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [4][3] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

1,3,3,1 Subset: 12 at cycle number: 126000

{2,1,3,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][1] on the matrix

Performing this movement: (DOWN): 3

MOVEMENT IS OUT OF BOUNDS

You are currently at [2][1] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

********DECISION!!!**********

You are currently at [2][3] on the matrix

****

{2,1,1,4} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 4

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][1] on the matrix

****

{1,4,1,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 4

Successfully moved 4 to the right

You are currently at [1][4] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][4] on the matrix

Performing this movement: (RIGHT): 2

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [2][4] on the matrix

****

{1,5,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 5

MOVEMENT IS OUT OF BOUNDS

You are currently at [1][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [2][1] on the matrix

****

{4,1,2,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 4

Successfully moved 4 downwards

You are currently at [4][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [4][1] on the matrix

Performing this movement: (DOWN): 2

MOVEMENT IS OUT OF BOUNDS

You are currently at [4][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [4][2] on the matrix

****

{2,2,3,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [2][2] on the matrix

Performing this movement: (DOWN): 3

MOVEMENT IS OUT OF BOUNDS

You are currently at [2][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [2][3] on the matrix

****

{2,2,1,3} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [2][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][2] on the matrix

Performing this movement: (RIGHT): 3

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][2] on the matrix

****

{1,1,2,4} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 4

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][1] on the matrix

****

{1,1,4,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 4

MOVEMENT IS OUT OF BOUNDS

You are currently at [1][1] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

********DECISION!!!**********

You are currently at [1][3] on the matrix

****

{2,3,1,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [2][3] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][3] on the matrix

Performing this movement: (RIGHT): 2

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][3] on the matrix

****

{2,4,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 4

Successfully moved 4 to the right

You are currently at [2][4] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][4] on the matrix

Performing this movement: (RIGHT): 1

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][4] on the matrix

****

{3,1,3,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [3][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][1] on the matrix

Performing this movement: (DOWN): 3

MOVEMENT IS OUT OF BOUNDS

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [3][2] on the matrix

****

{3,1,1,3} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [3][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [4][1] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

3,1,1,3 Subset: 13 at cycle number: 126000

{1,2,2,3} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [1][2] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [3][2] on the matrix

Performing this movement: (RIGHT): 3

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][2] on the matrix

****

{1,2,4,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [1][2] on the matrix

Performing this movement: (DOWN): 4

MOVEMENT IS OUT OF BOUNDS

You are currently at [1][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [1][3] on the matrix

****

There are: 26 possibilities SO FAR

The UP and RIGHT can be inversed along its path for alternate solution

COMBINATIONS (WITH REPLACEMENT)

C^R(n + r) = (n+r-1)! / r!(n-1)!

C^R(5,5) = 9! / 5!(4)!

Combinations: 126

**********INITIAL VALUE OF CYCLES: 0

**********NEW VALUE CYCLES: 126000

**********RUNNING TOTAL CYCLES: 252000

***PROCESSING SET AT INDEX: 56

ENDING AT INDEX:*** 91

{1,1,2,3,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [3][4] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

1,1,2,3,1 Subset: 14 at cycle number: 252000

{1,1,2,1,3} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][2] on the matrix

Performing this movement: (DOWN): 3

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][2] on the matrix

****

{2,3,1,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [2][3] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][3] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][4] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

2,3,1,1,1   Subset: 15 at cycle number: 252000

{2,1,2,2,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][1] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [4][1] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [4][3] on the matrix

Performing this movement: (DOWN): 1

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [4][3] on the matrix

****

{3,1,1,1,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [3][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [4][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [4][2] on the matrix

Performing this movement: (DOWN): 2

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [4][2] on the matrix

****

{1,3,1,2,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [1][3] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][3] on the matrix

Performing this movement: (RIGHT): 2

MOVEMENT IS OUT OF BOUNDS

You are currently at [2][3] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [3][3] on the matrix

****

{3,1,2,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [3][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][1] on the matrix

Performing this movement: (DOWN): 2

MOVEMENT IS OUT OF BOUNDS

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [4][2] on the matrix

****

{1,1,3,1,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [4][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [4][2] on the matrix

Performing this movement: (DOWN): 2

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [4][2] on the matrix

****

{3,2,1,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [3][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [3][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [4][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [4][3] on the matrix

Performing this movement: (DOWN): 1

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [4][3] on the matrix

****

{1,2,2,1,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [1][2] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [3][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][3] on the matrix

Performing this movement: (DOWN): 2

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][3] on the matrix

****

{1,2,1,3,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [1][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][2] on the matrix

Performing this movement: (RIGHT): 3

MOVEMENT IS OUT OF BOUNDS

You are currently at [2][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [3][2] on the matrix

****

{1,2,1,1,3} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [1][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][3] on the matrix

Performing this movement: (DOWN): 3

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [2][3] on the matrix

****

{1,1,4,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 4

MOVEMENT IS OUT OF BOUNDS

You are currently at [1][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [2][2] on the matrix

****

{2,2,1,2,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [2][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][2] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [3][4] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

2,2,1,2,1 Subset: 16 at cycle number: 252000

{1,1,1,4,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][1] on the matrix

Performing this movement: (RIGHT): 4

MOVEMENT IS OUT OF BOUNDS

You are currently at [2][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [3][1] on the matrix

****

{1,1,1,2,3} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][1] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [2][3] on the matrix

Performing this movement: (DOWN): 3

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [2][3] on the matrix

****

{1,2,3,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [1][2] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [4][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [4][3] on the matrix

Performing this movement: (DOWN): 1

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [4][3] on the matrix

****

{2,1,1,1,3} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][2] on the matrix

Performing this movement: (DOWN): 3

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][2] on the matrix

****

{2,1,1,3,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [3][4] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

2,1,1,3,1 Subset: 17 at cycle number: 252000

{1,1,2,2,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [3][3] on the matrix

Performing this movement: (DOWN): 2

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][3] on the matrix

****

{4,1,1,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 4

Successfully moved 4 downwards

You are currently at [4][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [4][1] on the matrix

Performing this movement: (DOWN): 1

MOVEMENT IS OUT OF BOUNDS

You are currently at [4][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [4][2] on the matrix

Performing this movement: (DOWN): 1

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [4][2] on the matrix

****

{2,1,2,1,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][1] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [4][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [4][2] on the matrix

Performing this movement: (DOWN): 2

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [4][2] on the matrix

****

{3,1,1,2,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [3][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [4][1] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [4][3] on the matrix

Performing this movement: (DOWN): 1

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [4][3] on the matrix

****

{1,3,1,1,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [1][3] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][3] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][4] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

1,3,1,1,2   Subset: 18 at cycle number: 252000

{2,1,3,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][1] on the matrix

Performing this movement: (DOWN): 3

MOVEMENT IS OUT OF BOUNDS

You are currently at [2][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [3][2] on the matrix

****

{1,3,2,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [1][3] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [3][3] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][4] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

1,3,2,1,1   Subset: 19 at cycle number: 252000

{1,1,3,2,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [4][1] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [4][3] on the matrix

Performing this movement: (DOWN): 1

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [4][3] on the matrix

****

{1,4,1,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 4

Successfully moved 4 to the right

You are currently at [1][4] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][4] on the matrix

Performing this movement: (RIGHT): 1

MOVEMENT IS OUT OF BOUNDS

You are currently at [2][4] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [3][4] on the matrix

****

{1,2,2,2,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [1][2] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [3][2] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [3][4] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

1,2,2,2,1   Subset: 20 at cycle number: 252000

{1,2,1,2,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [1][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][2] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [2][4] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

1,2,1,2,2 Subset: 21 at cycle number: 252000

{2,2,1,1,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [2][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][3] on the matrix

Performing this movement: (DOWN): 2

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][3] on the matrix

****

{1,1,1,3,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][1] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [2][4] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

1,1,1,3,2   Subset: 22 at cycle number: 252000

{1,1,1,1,4} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][2] on the matrix

Performing this movement: (DOWN): 4

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [2][2] on the matrix

****

{2,1,1,2,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [3][3] on the matrix

Performing this movement: (DOWN): 2

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][3] on the matrix

****

{2,2,2,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [2][2] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [4][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [4][3] on the matrix

Performing this movement: (DOWN): 1

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [4][3] on the matrix

****

There are: 44 possibilities SO FAR

The UP and RIGHT can be inversed along its path for alternate solution

COMBINATIONS (WITH REPLACEMENT)

C^R(n + r) = (n+r-1)! / r!(n-1)!

C^R(5,6) = 10! / 6!(4)!

Combinations: 210

**********INITIAL VALUE OF CYCLES: 0

**********NEW VALUE CYCLES: 210000

**********RUNNING TOTAL CYCLES: 462000

***PROCESSING SET AT INDEX: 91

ENDING AT INDEX:*** 112

{1,2,2,1,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [1][2] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [3][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][3] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [4][3] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!*****************

You are currently at [4][4] on the matrix

****

1,2,2,1,1,1   Subset: 23 at cycle number: 462000

{1,1,2,1,2,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][2] on the matrix

Performing this movement: (DOWN): 2

MOVEMENT IS OUT OF BOUNDS

You are currently at [3][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [3][3] on the matrix

****

{1,1,1,1,1,3} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][2] on the matrix

Performing this movement: (RIGHT): 3

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][2] on the matrix

****

{1,1,1,3,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][1] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [2][4] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][4] on the matrix

Performing this movement: (RIGHT): 1

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][4] on the matrix

****

{1,1,2,1,1,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [4][2] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

1,1,2,1,1,2 Subset: 24 at cycle number: 462000

{2,1,1,2,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [3][3] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [4][3] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!******************

You are currently at [4][4] on the matrix

****

2,1,1,2,1,1   Subset: 25 at cycle number: 462000

{1,1,3,1,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [4][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [4][2] on the matrix

Performing this movement: (DOWN): 1

MOVEMENT IS OUT OF BOUNDS

You are currently at [4][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [4][3] on the matrix

****

{1,1,1,2,2,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][1] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [2][3] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [4][3] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

1,1,1,2,2,1   Subset: 26 at cycle number: 462000

{3,1,1,1,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 3

Successfully moved 3 downwards

You are currently at [3][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [4][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [4][2] on the matrix

Performing this movement: (DOWN): 1

MOVEMENT IS OUT OF BOUNDS

You are currently at [4][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [4][3] on the matrix

****

{1,2,1,1,1,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [1][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][3] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][3] on the matrix

Performing this movement: (RIGHT): 2

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][3] on the matrix

****

{2,2,1,1,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [2][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][3] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [4][3] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

2,2,1,1,1,1   Subset: 27 at cycle number: 462000

{2,1,1,1,2,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][2] on the matrix

Performing this movement: (DOWN): 2

MOVEMENT IS OUT OF BOUNDS

You are currently at [3][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [3][3] on the matrix

****

{1,1,1,2,1,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][1] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [2][3] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][3] on the matrix

Performing this movement: (RIGHT): 2

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][3] on the matrix

****

{1,3,1,1,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 3

Successfully moved 3 to the right

You are currently at [1][3] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][3] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][4] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][4] on the matrix

Performing this movement: (RIGHT): 1

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][4] on the matrix

****

{1,2,1,1,2,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [1][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][3] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [4][3] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

1,2,1,1,2,1   Subset: 28 at cycle number: 462000

{1,1,1,1,3,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][2] on the matrix

Performing this movement: (DOWN): 3

MOVEMENT IS OUT OF BOUNDS

You are currently at [2][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [2][3] on the matrix

****

{2,1,1,1,1,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [4][2] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

2,1,1,1,1,2   Subset: 29 at cycle number: 462000

{1,1,2,2,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [3][3] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [4][3] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

1,1,2,2,1,1   Subset: 30 at cycle number: 462000

{2,1,2,1,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][1] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [4][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [4][2] on the matrix

Performing this movement: (DOWN): 1

MOVEMENT IS OUT OF BOUNDS

You are currently at [4][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

********DECISION!!!**********

You are currently at [4][3] on the matrix

****

{1,1,1,1,2,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][2] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [4][2] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

1,1,1,1,2,2 Subset: 31 at cycle number: 462000

{1,2,1,2,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [1][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][2] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [2][4] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][4] on the matrix

Performing this movement: (RIGHT): 1

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][4] on the matrix

****

There are: 62 possibilities SO FAR

The UP and RIGHT can be inversed along its path for alternate solution

COMBINATIONS (WITH REPLACEMENT)

C^R(n + r) = (n+r-1)! / r!(n-1)!

C^R(5,7) = 11! / 7!(4)!

Combinations: 330

**********INITIAL VALUE OF CYCLES: 0

**********NEW VALUE CYCLES: 330000

**********RUNNING TOTAL CYCLES: 792000

***PROCESSING SET AT INDEX: 112

ENDING AT INDEX:*** 119

{1,1,2,1,1,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [4][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [4][3] on the matrix

Performing this movement: (DOWN): 1

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [4][3] on the matrix

****

{1,1,1,1,2,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][2] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [4][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [4][3] on the matrix

Performing this movement: (DOWN): 1

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [4][3] on the matrix

****

{1,1,1,1,1,2,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][2] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [3][4] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

1,1,1,1,1,2,1   Subset: 32 at cycle number: 792000

{1,2,1,1,1,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [1][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][3] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][3] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][4] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

1,2,1,1,1,1,1   Subset: 33 at cycle number: 792000

{1,1,1,1,1,1,2} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][3] on the matrix

Performing this movement: (DOWN): 2

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [3][3] on the matrix

****

{2,1,1,1,1,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 2

Successfully moved 2 downwards

You are currently at [2][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [2][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][1] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][2] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [4][2] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [4][3] on the matrix

Performing this movement: (DOWN): 1

MOVEMENT IS OUT OF BOUNDS

********DECISION!!!**********

You are currently at [4][3] on the matrix

****

{1,1,1,2,1,1,1} will be evaluated against the 5x5 matrix********

You are currently at [0][0] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [1][0] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [1][1] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [2][1] on the matrix

Performing this movement: (RIGHT): 2

Successfully moved 2 to the right

You are currently at [2][3] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

You are currently at [3][3] on the matrix

Performing this movement: (RIGHT): 1

Successfully moved 1 to the right

You are currently at [3][4] on the matrix

Performing this movement: (DOWN): 1

Successfully moved 1 downwards

********DECISION!!!**********

You are currently at [4][4] on the matrix

****

1,1,1,2,1,1,1   Subset: 34 at cycle number: 792000

There are: 68 possibilities SO FAR

The UP and RIGHT can be inversed along its path for alternate solution

COMBINATIONS (WITH REPLACEMENT)

C^R(n + r) = (n+r-1)! / r!(n-1)!

C^R(5,8) = 12! / 8!(4)!

Combinations: 495

**********INITIAL VALUE OF CYCLES: 0

**********NEW VALUE CYCLES: 495000

**********RUNNING TOTAL CYCLES: 1287000

***PROCESSING SET AT INDEX: 119

ENDING AT INDEX:*** 119

There are: 68 possibilities SO FAR

The UP and RIGHT can be inversed along its path for alternate solution

COMBINATIONS (WITH REPLACEMENT)

C^R(n + r) = (n+r-1)! / r!(n-1)!

C^R(5,9) = 13! / 9!(4)!

Combinations: 715

**********INITIAL VALUE OF CYCLES: 0

**********NEW VALUE CYCLES: 715000

**********RUNNING TOTAL CYCLES: 2002000

***PROCESSING SET AT INDEX: 119

ENDING AT INDEX:*** 119

There are: 68 possibilities SO FAR

The UP and RIGHT can be inversed along its path for alternate solution

** Process exited - Return Code: 0 **