

Maximum Path in Matrix

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You are given a  $N \times N$  integer matrix **A**. You are initially on **(1,1)** and want to reach **(N,N)** and only have **B** energy to complete the task. At each step if you are on **(x,y)** you can move to:

- 1. *East* **(x,y+1)** using **0** energy.
- 2. *South* **(x+1,y)** using **0** energy.
- 3. *North* **(x-1,y)** using **1** energy.(if remaining energy > 1)
- 4. *West* **(x,y-1)** using **1** energy. (if remaining energy > 1)

Find the max sum of all elements you access during a path. If you visit a cell **x** times, it will be added **x** times.

**Note:** When you reach **(N,N)** in the last step of your path, your energy should be exactly **1**.

Input Format:

First argument of input contains an integer matrix A  
Second argument of input contains an integer B

Output Format:

return a single integer denoting max sum along a path.

Constraints:

$2 \leq N \leq 100$   
 $1 \leq B \leq 100$   
 $|A[i][j]| \leq 1000,000$

For Example:

Input 1:  
A =[[1, 2, 3]  
[2, 3, 9]  
[2, 8, 5]] B = 2  
Output 1:  
34  
Explanation 1:  
Path is 1->2->3->9->5->9->5.  
Input 2:  
A =[[1, 2, 3]  
[2, 3, 9]  
[2, 8, 5]] B = 1  
Output 2:  
20