

DP-S004 (E004)Solved Challenges **0/3**[Back To Challenges List](#)**Robot - Stair Climbing****ID:10532 Solved By 615 Users**

There are **N** stairs to be climbed in a building. A robot can take only **S** different leaps each containing certain distinct steps which are passed as the input. The program must print the number of ways **C** of steps the robot can take to climb exactly N stairs.

Boundary Condition(s): $1 \leq N \leq 50$ $1 \leq S \leq 10$ **Input Format:**

The first line contains N and S separated by a space.

The second line contains S integer values separated by a space.

Output Format:

The first line contains the C.

Example Input/Output 1:

Input:

5 2

2 3

Output:

2

Explanation:

There are 5 steps. The robot can take 2 or 3 steps at a time.

So the possible ways are

2 3 and 3 2

Example Input/Output 2:

Input:

6 2

1 5

Output:

3

Explanation:

The possible ways are

1 1 1 1 1 1

5 1

1 5

Max Execution Time Limit: 400 millisecs

Ambiance

Python3 (3.x) ▾



Reset

```
1  _ = list(map(int, input().strip().split()))
2  n = _[0]
3  leaps_count = _[1]
4  leaps = list(map(int, input().strip().split()))
5  ways=[0]*(n+1)
6  ways[0] = 1
7
8  for step in range(1,n+1):
9      for index in range(0,leaps_count):
10         if(step>=leaps[index]):
11             ways[step] += ways[step-leaps[index]];
12
13  print(ways[n])
14
15
```

Save

Run

☐ Run with a custom test case (Input/Output)