

Stairs Again

time limit per test: 1 second (1 second for Python)

memory limit per test: 256 megabytes

input: standard input

output: standard output

points: 100 · problem code: stairsagain · author: inj

There is a staircase of n steps in front of you. You begin at step 1, and can jumps of sizes between a and b , or jumps of sizes between c and d . How many ways are there to reach step n .

Input

The first line of input contains space-separated integers n, a, b, c, d .

Output

The number of ways of getting from step 1 to n , modulo $10^9 + 7$

Constraints

- $10 \leq n \leq 10^5$
- $1 \leq a \leq b < c \leq d \leq 10^5$

Example 1

In

```
10 3 3 4 4
```

Out

```
1
```

Example 2

In

```
20 1 8 13 14
```

Out

```
256213
```