Problem F. SubarrayXD

Time limit 1000 ms
Memory limit 256MB

Problem Description

11/22 update.

A simplified poem consists of two phrases, requiring X and Y syllables, respectively.

Consider all integer sequences $a_1, a_2, \ldots, a_N$ where each element a_i satisfies $1 \leq a_i \leq 10$.

Out of the total 10^N possible sequences, we want to find how many contain an X, Y-*Poem*.

An integer sequence $a_1, \ldots, a_N$ is said to **contain an X, Y-Poem** if and only if there exist three indices i, j, k (satisfying $1 \leq i \leq j < k \leq N$) such that the following two conditions hold simultaneously:

- $\sum_{m=i}^{j} a_m = X$
- $\sum_{m=j+1}^{k} a_m = Y$

Since the answer can be extremely large, print the answer modulo $10^9 + 7$.

Input format

The first and the only line contains three integers N, X, Y ($1 \leq N \leq 30, 1 \leq X \leq 7, 1 \leq Y \leq 10, X + Y \leq 14$).

Output format

Print a single integer representing the total number of sequences that contain an X, Y-Poem, modulo $10^9 + 7$.

Subtask score

Subtask	Score	Additional Constraints
0	0	Sample testcases
1	30	$X = 1$
2	70	No additional constraints

Sample

Sample Input 1

```
4 5 7
```

Sample Output 1

```
542
```