Inaho IX

Time limit: 0.6s   **Memory limit:** 64M

Inaho is given a function:

$$f(x) = \begin{cases} a_1 f(x-1) + a_2 f(x-2) + \cdots + a_N f(x-N) & \text{if } x > N \\ 1 & \text{if } x \le N \end{cases}$$

Given N, Z and a, Inaho wants you to print $f(Z) \bmod 10^9 + 7$.

Input Specification

The first line will contain two integers, N, Z $(1 \le N \le 10, 1 \le Z < 10^{10\,000})$.

The second line will contain N integers, $a_1, a_2, \ldots, a_N$ $(1 \le a_i \le 10^6)$.

Output Specification

Print $f(Z) \bmod 10^9 + 7$.

Subtasks

Subtask 1 [10%]

$Z < 10^5$

Subtask 2 [30%]

$Z < 10^{18}$

Subtask 3 [60%]

No additional constraints.

Sample Input 1

```
2 5
1 1
```

Sample Output 1

```
5
```

Sample Input 2

```
6 90000
4 2 29 5 1 10
```

Sample Output 2

```
408918679
```