array

- Time limit: 1 second

- Memory limit: 256 MB

We know the elements of an array$n$A member of the integers between1And$m$are and the difference of two adjacent elements is at most one.

You are given a description of this array where some of the array elements are not specified. Find the number of valid arrays of the given form.
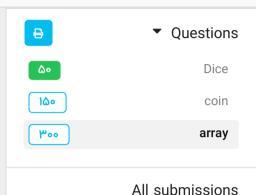
Input

In the first line, enter two natural numbers$n$And$m$separated by distance.

$$1 \le n \le 10^5, 1 \le m \le 100$$

In the second line$n$There are numbers that describe the desired array. The number zero indicates the unspecified element.

$$0 \le x_i \le m$$

Output

The number of possible arrays with the given description in measure$10^9 + 7$print

Example

Sample input 1

```
3 5
2 0 2
```

Sample output 1

```
3
```

The following arrays are possible for the described description.

- $[2, 1, 2]$
- $[2, 2, 2]$
- $[2, 3, 2]$

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