Linear Diophantine Equation

Given a positive integer ***M*** and ***N*** positive integers $a_1, a_2, ..., a_N$. Count the number of non-negative integer tuples $(x_1, x_2, ..., x_N)$ such that:

$$a_1 * x_1 + a_2 * x_2 + ... + a_N * x_N = M$$

Input

- The first line contains two integers ***N*** and ***M***.

- The second line contains ***N*** integers $a_1, a_2, ..., a_N$ respectively.

Output

- Output only one integer, the number of asked tuples modulo ***998244353***.

Constrains

- $1 \leq N \leq 60\,000$
- $1 \leq M \leq 10^{18}$
- $1 \leq a_i \leq 60\,000$
- $1 \leq a_1 + a_2 + ... + a_N \leq 60\,000$

Example

Input:

```
3 10
3 2 5
```

Output:

```
4
```

Input:

```
5 100000
1 3 4 6 1000
```

Output:

```
865762992
```

Note

- My solution runs in less than 0.8s for each input file, 6.3s in total.