[程式實務] - Linear Equation I

Time: 1 sec / Memory: 256 MB

Problem Statement

In this problem, your task is to find the number of non-negative integer solutions to the following equation:

$$a_1 \cdot x_1 + a_2 \cdot x_2 + \cdots + a_n \cdot x_n = b,$$

where $a_1, a_2, \ldots, a_n$, and b are non-negative integers given as input.

For example, there are 4 distinct non-negative integer solutions to the equation

$$x_1 + 2x_2 + 3x_3 = 4,$$

namely,

- $(0, 2, 0)$
- $(1, 0, 1)$
- $(2, 1, 0)$
- $(4, 0, 0)$.

Input

The first line contains an integer n, where $1 \leq n \leq 15$.

The second line contains n non-negative integers $a_1, a_2, \ldots, a_n$ separated by spaces, where $1 \leq a_i \leq 10$

The third line contains an integer b, where $1 \leq b \leq 10$.

Output

Output a single integer, the number of non-negative integer solutions to the equation.

Example

Input:

```
3
1 2 3
4
```

Output:

```
4
```