



Coin Change

Given a value N , find the number of ways to make change for N cents, if we have infinite supply of each of $S = \{S_1, S_2, \dots, S_m\}$ valued coins. The order of coins doesn't matter. For example, for $N = 4$ and $S = \{1, 2, 3\}$, there are four solutions: $\{1, 1, 1, 1\}, \{1, 1, 2\}, \{2, 2\}, \{1, 3\}$. So output should be 4. For $N = 10$ and $S = \{2, 5, 3, 6\}$, there are five solutions: $\{2, 2, 2, 2, 2\}, \{2, 2, 3, 3\}, \{2, 2, 6\}, \{2, 3, 5\}$ and $\{5, 5\}$. So the output should be 5.

Input:

The first line contains an integer '**T**' denoting the total number of test cases. In each test cases, the first line contains an integer '**M**' denoting the size of array. The second line contains M space-separated integers A_1, A_2, \dots, A_N denoting the elements of the array. The third line contains an integer '**N**' denoting the cents.

Output:

Print number of possible ways to make change for N cents.

Constraints:

$$1 \leq T \leq 50$$

$$1 \leq N \leq 300$$

$$1 \leq A[i] \leq 300$$

Example:

Input:

2

3

1 2 3

4

4

2 5 3 6

10

Output:

4

5

Explanation:

Testcase 1: The possibilities are as such: $\{1, 1, 1, 1\}, \{1, 1, 2\}, \{1, 3\}, \{2, 2\}$.