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☆ Subsets of 0s

Ashutosh is a very mischievous student. His mathematics teacher wants to teach him a lesson so, he gave Ashutosh an array of positive integers Arr[a1, a2,....,an] where ai>0. primeSum is an integer which is equal to sum of all the prime factors of each element in Arr, modulus (10^6). Ashutosh's job is to find no of ways in which a set of 'primeSum' number of 0s can be divided into k subsets modulus(10^9+7).
Ashutosh is a little nervous, can you help him get out of this trouble ?
Note: A subset can be empty

INPUT:
The first line indicates the number of subsets, k.
The next line has a single integer n denoting the length of array.
Next n lines contain the integers in the array.

Input Format for custom testing:
2 --> number of subsets, k
3 --> length of the array
3 --> length of the array for hackerrank representation of integer array followed by elements of the array
1
2
6

OUTPUT:
An integer representing the number of ways in which a set of primeSum number of 0s can be divided into k subsets mod (10^9+7).

Constraints:
0<ai<=10^6
1<=n<=10^5
1<=k<=100

Sample:

INPUT:
2
3
3
1
2
6

OUTPUT:
8

EXPLANATION:
The sum of all prime factors of elements of array modulus 10^6 is 7
A set of 7 0s can be divided into 2 subsets in 8 different ways. - {{}, {0, 0, 0, 0, 0, 0 ,0}}, {{0}, {0, 0, 0, 0, 0 ,0}}, {{0, 0}, {0, 0, 0, 0 ,0}} and so on.
So answer is 8 modulus 10^9+7 = 8.

INPUT:
3
3
3
1
2
6

EXPLANATION:
The sum of all prime factors of elements of array modulus 10^6 is 7
A set of 7 0s can be divided into 3 subsets in 36 different ways.
So answer is 36 modulus 10^9+7 = 36.

YOUR ANSWER

View Code Diff C

```
1   #include <assert.h>…
19
20  /*
21   * Complete the 'getSubsets' function below.
22   *
23   * The function is expected to return an INTEGER.
24   * The function accepts following parameters:
25   *  1. INTEGER k
26   *  2. INTEGER n
27   *  3. INTEGER_ARRAY arr
28   */
29
30  int getSubsets(int k, int n, int arr_count, int* arr) {
31
32  }
33
34  int main()…
```

Line: 19 Col: 1

Test against custom input

Run Code Submit code & Continue

(You can submit any number of times)

Download sample test cases *The input/output files have Unix line endings. Do not use Notepad to edit them on windows.*