DSA II Lab (G) - Spring 2024

Coding Test 3 (DP Algorithm)

Marks: 20 Time: 40 minutes

Question 1

Consider a money system consisting of n coins. Each coin has a positive integer value. Your task is to calculate the number of distinct *ordered* ways you can produce a money sum xxx using the available coins.

For example, if the coins are {2,3,5} and the desired sum is 9, there are 3 ways:

- 2 + 2 + 5
- 3 + 3 + 3
- 2 + 2 + 2 + 3

Input

The first input line has two integers n and x: the number of coins and the desired sum of money.

The second line has n distinct integers $c_1,c_2,\ldots,c_n$: the value of each coin.

Output

Print one integer: the number of ways.

Example:

Input:

3 9

2 3 5

Output: 3