

Lab 11

Same using String: <https://leetcode.com/problems/word-break-ii/>

Problem Description:

Given a specified total t and a list of n integers, find number of distinct sums, using numbers from the list of n integers, that add up to the total t . For example, if $t = 4$, $n = 6$, and the list is $[4, 3, 2, 2, 1, 1]$, then there are four different sums that equal 4: 4, $3+1$, $2+2$, and $2+1+1$. (A number can be used within a sum as many times as it appears in the list, and a single number counts as a sum.) Your job is to solve this problem in general.

Input: The input contains three lines. The first line contains t , the total. The second line contains n , the number of integers in the list. The third line contains the list of n integers x_1, \dots, x_n . t will be a positive integer less than 1000, n will be an integer between 1 and 12 (inclusive), and x_1, \dots, x_n will be positive integers less than 100. The numbers x_1, \dots, x_n will be separated by exactly one space. Numbers in each list appear in non-increasing order, and there may be repetitions.

Output: The output will contain number of sums for each test case. A number may be repeated in the sum as many times as it was repeated in the original list. Within each test case, all sums must be distinct; the same sum cannot appear more than once.

Test Case	Input	Output
1	4 6 4 3 2 2 1 1	4
2	6 4 2 1 1 1	0
3	300 10 50 50 50 50 25 25 25 25 25 25	2