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The Virtual Learning Environment for Computer Programming

Equal sums (3)

Write a program that, given a natural number *s* and *n* natural numbers x_1, \ldots, x_n , prints all the subsets (maybe with repeated numbers, but using every x_i at most once) whose sum is exactly *s*.

Input

Input consists of a natural number *s*, followed by a number n > 0, followed by x_1, \ldots, x_n .

Output

Print all the subsets whose sum is *s* that can be made up with x_1, \ldots, x_n .

Information about the checker

You can print in any order both the solutions and the elements inside each solution.

Hint

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For this exercise, a very simple algorithm can be too slow.

Sample input 1	Sample output 1
6 7 1 6 0 1 3 0 2	<pre>{1,3,2} {1,3,0,2} {0,1,3,2} {0,1,3,0,2} {6} {6,0} {6,0} {6,0,0} {1,3,2} {1,3,0,2} {1,0,3,2} {1,0,3,0,2}</pre>
Sample input 2	Sample output 2
10	$\{1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1\}$

Problem information

1 1 1 1 1 1 1 1 1 1

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