



HOME CONTESTS GYM PROBLEMSET GROUPS RATING API CANADA CUP 🖫 SECTIONS

PROBLEMS SUBMIT STATUS STANDINGS CUSTOM TEST

# A. Business trip

time limit per test: 2 seconds memory limit per test: 256 megabytes input: standard input output: standard output

What joy! Petya's parents went on a business trip for the whole year and the playful kid is left all by himself. Petya got absolutely happy. He jumped on the bed and threw pillows all day long, until...

Today Petya opened the cupboard and found a scary note there. His parents had left him with duties: he should water their favourite flower all year, each day, in the morning, in the afternoon and in the evening. "Wait a second!" — thought Petya. He know for a fact that if he fulfills the parents' task in the i-th ( $1 \le i \le 12$ ) month of the year, then the flower will grow by  $a_i$  centimeters, and if he doesn't water the flower in the i-th month, then the flower won't grow this month. Petya also knows that try as he might, his parents won't believe that he has been watering the flower if it grows strictly less than by k centimeters.

Help Petya choose the minimum number of months when he will water the flower, given that the flower should grow no less than by k centimeters.

### Input

The first line contains exactly one integer k ( $0 \le k \le 100$ ). The next line contains twelve space-separated integers: the i-th ( $1 \le i \le 12$ ) number in the line represents  $a_i$  ( $0 \le a_i \le 100$ ).

## Output

Print the only integer — the minimum number of months when Petya has to water the flower so that the flower grows no less than by k centimeters. If the flower can't grow by k centimeters in a year, print -1.

### Examples

input	
5 111122322111	
output	
2	
input	

input	
0 000000011230	
output	
0	

input	
11 114115114111	
output	
3	

### Note

Let's consider the first sample test. There it is enough to water the flower during the seventh and the ninth month. Then the flower grows by exactly five centimeters.

In the second sample Petya's parents will believe him even if the flower doesn't grow at all (k=0). So, it is possible for Petya not to water the flower at all.

### → **Attention**

Package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then value 800 ms will be displayed and used to determine the verdict

### Codeforces Round #106 (Div. 2)

### **Finished**

### → Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ACM-IOPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest



# → Contest materials Announcement Tutorial #1 Tutorial #2

Codeforces (c) Copyright 2010-2016 Mike Mirzayanov The only programming contests Web 2.0 platform Server time: Nov/30/2016 19:18:47<sup>UTC+8</sup> (c4).

Desktop version, switch to mobile version.