

Sleepy Sasha is Trouble at the University

Input file: `standard input`
Output file: `standard output`
Time limit: 1 second
Memory limit: 256 megabytes

Once upon a time, Sasha fell asleep so deeply that he was able to rewrite the laws of physics, and now in his reality, a day lasts 30 hours.

And today he decided not to rewrite the laws, but to go to classes. He has been assigned x classes, each lasting 90 minutes. In addition to classes, Sasha, like any decent student, has some unfinished homework, so today he decided to complete all the assignments.

There are a total of n unfinished homework assignments, and it will take Sasha a_i minutes to complete each of them.

Inform poor Sasha how many hours and minutes he will sleep today, if he needs to attend all the classes and complete all the homework. Note that he cannot do more than one task at a time. Also, he cannot do his homework while on classes.

Input

The first line contains two integers n and x ($1 \leq n, x \leq 100$) — the number of homework assignments and classes for Sasha.

The second line contains n integers a_1, a_2, \dots, a_n ($1 \leq a_i \leq 100$) — the time it takes Sasha to complete homework assignment number i .

Output

Output -1 if Sasha not only will not sleep, but also will not have time to complete all the unfinished homework.

Otherwise, output two integers: the number of hours and the number of minutes Sasha will sleep.

Scoring

In this problem, there are conditional blocks. If your solution works correctly for certain constraints, it will receive a certain number of points. Note that each test is graded individually.

1. (10 points): $n = 1$;
2. (10 points): $x = 1$;
3. (20 points): $a_1 = a_2 = \dots = a_n$;
4. (60 points): without additional constraints.

Examples

standard input	standard output
2 2 1 2	26 57
3 3 60 60 60	22 30
1 19 29	1 1

Note

In the first test, Sasha has 2 classes, which will take a total of $90 + 90 = 180$ minutes, after which he will spend another $1 + 2 = 3$ minutes on homework, so he will have exactly 26 hours and 57 minutes left out of 30 hours.

In the second test, Sasha has 3 classes, which will take a total of 270 minutes, and he will spend another $60 + 60 + 60 = 180$ minutes on homework, so he will have only 22 hours and 30 minutes left for sleep.