

## Problem B. Balloons

Source file name: B.c, B.cpp, B.java  
Input: Standard  
Output: Standard  
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This year CUCEI's programming contest is so easy that Félix believes every team will solve all the problems, these are good news for you but not for Félix. As you may know each problem has assigned a color, once a team solves that problem a balloon with that color is put in the place where the team who solved the problem is working, since all the teams will be solving all the problems Félix needs to get each balloon color as much times as teams registered in the contest.

The budget for the contest is very low and Félix will feel so bad if a team can't have all the balloons of the problems the team solved. This left Félix with no choice but to limit the number of teams that will be allowed in the contest with a simple rule. If Félix can buy only  $X$  balloons of each color with the budget Félix has then only  $X$  teams will be allowed to register on the contest.

Given the budget  $B$  Felix has, the number  $N$  of problems in the set and the cost of each color of balloon, can you determine what is the maximum number of teams that Félix can allow in the contest?

### Input

The input consist of several test cases. Each test case begins with a line containing two numbers  $N$  and  $B$ . The next line contains  $N$  numbers separated by a space, the cost of each of the balloon colors. The end of the test cases is given by a case where  $N$  and  $B$  equals 0.

- $1 \leq N \leq 100$
- $1 \leq B \leq 5000$
- The cost of each balloon  $p_i$  is in the range  $1 \leq p_i \leq 500$

### Output

For each test case print in one line the maximum number  $X$  of teams that Félix can allow in the contest.

### Example

Input	Output
3 100	16
1 2 3	333
2 1000	
1 2	
0 0	