Halloween Sale

You wish to buy video games from the famous online video game store Mist.

Usually, all games are sold at the same price, ***p*** euros. However, they are planning to have the seasonal Halloween Sale next month in which you can buy games at a cheaper price. Specifically, the first game you buy during the sale will be sold at ***p*** euros, but every subsequent game you buy will be sold at exactly ***d*** euros less than the cost of the previous one you bought. This will continue until the cost becomes less than or equal to ***m*** euros, after which every game you buy will cost ***m*** euros each.

For example, if ***p = 20, d = 3***, and ***m = 6***, then the following are the costs of the first ***11*** games you buy, in order:

20, 17, 14, 11, 8, 6, 6, 6, 6, 6, 6

You have euros ***s*** in your Mist wallet. How many games can you buy during the Halloween Sale?

Input Format

The first and only line of input contains four space-separated integers ***p, d, m,*** and ***s***.

Constraints

- **$1 \leq m \leq p \leq 100$**
- **$1 \leq d \leq 100$**
- **$1 \leq s \leq 10^4$**

Output Format

Print a single line containing a single integer denoting the maximum number of games you can buy.

Sample

Sample input	Sample output
20 3 6 80	6

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Explanation

We have ***p = 20, d = 3,*** and ***m = 6,*** the same as in the problem statement. We also have ***s = 80*** euros. We can buy ***6*** games since they cost ***20 + 17 + 14 + 11 + 8 + 6 = 76*** euros. However, we cannot buy a 7^{th} game. Thus, the answer is ***6***.

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