

A. Soldier and Bananas

time limit per test

1 second

memory limit per test

256 megabytes

input

standard input

output

standard output

A soldier wants to buy w bananas in the shop. He has to pay k dollars for the first banana, $2k$ dollars for the second one and so on (in other words, he has to pay $i \cdot k$ dollars for the i -th banana).

He has n dollars. How many dollars does he have to borrow from his friend soldier to buy w bananas?

Input

The first line contains three positive integers k, n, w ($1 \leq k, w \leq 1000, 0 \leq n \leq 10^9$), the cost of the first banana, initial number of dollars the soldier has and number of bananas he wants.

Output

Output one integer — the amount of dollars that the soldier must borrow from his friend. If he doesn't have to borrow money, output 0.

Examples

input

Copy

3 17 4

output

Copy

13