Problem Statement

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 ($1 \le k, w \le 1000, 0 \le n \le 10^9$), 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	

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Cost of i bananas

$$k + 2k + 3k \cdots ik = k \cdot (1 + 2 + \cdots i)$$
$$= k \cdot \frac{i(i+1)}{2}$$

Money to borrow

$$= \frac{k \cdot i \cdot (i+1)}{2} - n$$

```cpp
#include<iostream>
using namespace std;
int main(){

    int k , n , w;
    cin >> k >> n >> w;

    int ans = (k * w * (w + 1) / 2) - n;
    if(ans >= 0 ){
        cout << ans;

    }
    else{
        cout << 0;
    }



}
```

Time Complexity ⟶ O(1)

Space Complexity ⟶ O(1)