

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
3 17 4
output
13

Codeforces Round #304 (Div. 2)

Finished

→ Virtual participation

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Start virtual contest

→ Problem tags

implementation math

No tag edit access

→ Contest materials

- Announcement 
- Tutorial 