A. Strange Table

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

Polycarp found a rectangular table consisting of n rows and m columns. He noticed that each cell of the table has its number, obtained by the following algorithm **"by columns"**:

- cells are numbered starting from one;
- cells are numbered from left to right by columns, and inside each column from top to bottom;
- number of each cell is an integer one greater than in the previous cell.

For example, if $n = 3$ and $m = 5$, the table will be numbered as follows:

$$\begin{matrix} 1 & 4 & 7 & 10 & 13 \\ 2 & 5 & 8 & 11 & 14 \\ 3 & 6 & 9 & 12 & 15 \end{matrix}$$

However, Polycarp considers such numbering inconvenient. He likes the numbering **"by rows"**:

- cells are numbered starting from one;
- cells are numbered from top to bottom by rows, and inside each row from left to right;
- number of each cell is an integer one greater than the number of the previous cell.

For example, if $n = 3$ and $m = 5$, then Polycarp likes the following table numbering:

$$\begin{matrix} 1 & 2 & 3 & 4 & 5 \\ 6 & 7 & 8 & 9 & 10 \\ 11 & 12 & 13 & 14 & 15 \end{matrix}$$

Polycarp doesn't have much time, so he asks you to find out what would be the cell number in the numbering **"by rows"**, if in the numbering **"by columns"** the cell has the number x?

Input

The first line contains a single integer t ($1 \le t \le 10^4$). Then t test cases follow.

Each test case consists of a single line containing three integers n, m, x ($1 \le n, m \le 10^6$, $1 \le x \le n \cdot m$), where n and m are the number of rows and columns in the table, and x is the cell number.

Note that the numbers in some test cases do not fit into the 32-bit integer type, so you must use at least the 64-bit integer type of your programming language.

Output

For each test case, output the cell number in the numbering **"by rows"**.

Example

input Copy

```
5
1 1 1
2 2 3
3 5 11
100 100 7312
```

Codeforces Round #710 (Div. 3)
Finished

→ Virtual participation

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Start virtual contest

→ Problem tags

math *800

No tag edit access

→ Contest materials

- Announcement
- Tutorial

```
1000000 1000000 1000000000000
```

output Copy

```
1
2
9
1174
1000000000000
```
