Save the Prisoner!

A jail has N prisoners, and each prisoner has a unique id number, S, ranging from 1 to N. There are M sweets that must be distributed to the prisoners.

The jailer decides the fairest way to do this is by sitting the prisoners down in a circle (ordered by ascending S), and then, starting with some random S, distribute one candy at a time to each sequentially numbered prisoner until all M candies are distributed. For example, if the jailer picks prisoner $S = 2$, then his distribution order would be $(2, 3, 4, 5, \ldots, n - 1, n, 1, 2, 3, 4, \ldots)$ until all M sweets are distributed.

But wait—there's a catch—the very last sweet is poisoned! Can you find and print the ID number of the last prisoner to receive a sweet so he can be warned?

Input Format

The first line contains an integer, T, denoting the number of test cases.
The T subsequent lines each contain 3 space-separated integers:
N (the number of prisoners), M (the number of sweets), and S (the prisoner ID), respectively.

Constraints

- $1 \leq T \leq 100$
- $1 \leq N \leq 10^9$
- $1 \leq M \leq 10^9$
- $1 \leq S \leq 10^9$

Output Format

For each test case, print the ID number of the prisoner who receives the poisoned sweet on a new line.

Sample Input

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1
5 2 1
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Sample Output

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2
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Explanation

There are $N = 5$ prisoners and $M = 2$ sweets. Distribution starts at ID number $S = 1$, so prisoner 1 gets the first sweet and prisoner 2 gets the second (last) sweet. Thus, we must warn prisoner 2 about the poison, so we print 2 on a new line.