Save the Prisoner!

HackerRank

A jail has a number of prisoners and a number of treats to pass out to them. Their jailer decides the fairest way to divide the treats is to seat the prisoners around a circular table in sequentially numbered chairs. A chair number will be drawn from a hat. Beginning with the prisoner in that chair, one candy will be handed to each prisoner sequentially around the table until all have been distributed.

The jailer is playing a little joke, though. The last piece of candy looks like all the others, but it tastes *awful*. Determine the chair number occupied by that prisoner so he can be warned.

For example, there are 4 prisoners and 6 pieces of candy. The prisoners arrange themselves in seats numbered 0 to 3. A two is drawn from the hat. Prisoners receive candy at positions $2, 3, 0, 1, 2, 3$. The prisoner to be warned sits in chair number 3.

Input Format

The first line contains an integer, t, denoting the number of test cases.
The next t lines each contain 3 space-separated integers:
- n: the number of prisoners
- m: the number of sweets
- s: the chair number to start passing out treats at

Constraints

- $1 \leq t \leq 100$
- $1 \leq n \leq 10^9$
- $1 \leq m \leq 10^9$
- $1 \leq s \leq N$

Output Format

For each test case, print the chair number of the prisoner who receives the *awful treat* on a new line.

Sample Input 0

```
2
5 2 1
5 2 2
```

Sample Output 0

```
2
3
```

Explanation 0

In first query, there are $n = 5$ prisoners and $m = 2$ sweets. Distribution starts at seat number $s = 1$. Prisoners in seats numbered 1 and 2 get sweets. Warn prisoner 2.
In the second query, distribution starts at seat 2 so prisoners in seats 2 and 3 get sweets. Warn prisoner 3.