Problem K. King of Gamers

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

Little G is going to play n games.

Little G is the king of gamers. If he wants to win, he will definitely win a game. But if he doesn't care about winning or losing, he will lose a game because of his bad luck. Little G has an expected winning rate of $x = \frac{a}{b}$. When playing the i-th game, if his current winning rate is lower than or equal to x, he will be eager to win and win the game easily. Otherwise, he will enjoy the game and lose it.

Given n, a, b, Little G is wondering how many games he will win.

Note that when playing the first game, the winning rate is regarded as 0.

Input

The input consists of multiple test cases.

The first line consists of a single integer T ($1 \le T \le 100000$) – the number of test cases.

In the following T lines, each line consists of three integers n, a, b ($1 \le n \le 10^9, 0 \le a \le b \le 10^9, b \neq 0$), denoting a test case.

Output

Print T lines. Print one integer in each line, representing the answer of a test case.

Example

standard input	standard output
3 4 3 5 8 7 10 1 1 3	2 5 1

Note

In the first test case, $x = \frac{3}{5} = 0.6$:

- When playing the first game, the winning rate $= 0 \le x$, so Little G will win the game;
- When playing the second game, the winning rate $= \frac{1}{1} > x$, so Little G will lose the game;
- When playing the third game, the winning rate $= \frac{1}{2} \le x$, so Little G will win the game;
- When playing the fourth game, the winning rate $= \frac{2}{3} > x$, so Little G will lose the game.

In total, Little G will win 2 games, which is the answer of the first test case.