Mathematics Lecturer

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

Pak Blangkon is a mathematics lecturer at Gudang Mantu University who likes positive integers N.

One day, while teaching, he surprisingly asked his students a question,

- Suppose a and b are each non-negative integer less than N where $a \neq b$,
- Then suppose S is a set where $a, b \in S$,
- For any $x, y \in S$ where $x \neq y$, then $z \in S$ where $z = (x + y) \bmod N$.
- How many members is S?

Try to answer Pak Blangkon's question!

Input

The first line contains a positive integer T ($1 \leq T \leq 1000$) — the number of test cases in the input.

The next T lines each contain three integers N, a, and b ($2 \leq N \leq 10^{18}, 0 \leq a, b < N, a \neq b$) separated by spaces.

Output

For each test case print a non-negative integer representing the number of members of S.

Example

standard input	standard output
3 4 3 2 3 0 1 5 3 1	4 2 5