Guess The Sign (sign)

Edoardo and Giorgio are playing the "Guess the Sign" game. It works like this: the first player chooses two integers A and B, and the second one has to guess if the product of all integers in the $[A, B]$ range is positive, negative, or null.

For example, imagine that Edoardo chooses $A = 1$ and $B = 5$, Giorgio then needs to quickly guess that the product of all integers in the $[1, 5]$ range **is positive**, because $1 \times 2 \times 3 \times 4 \times 5 = 120$, which indeed is positive. Then, during his turn, Giorgio might decide to choose $A = -1$ and $B = 1$, and Edoardo would need to quickly guess that the product of all integers in the $[-1, 1]$ range is null, because $-1 \times 0 \times 1$ is equal to zero. (The game usually ends whenever a player makes the first mistake.)

The game is very fast-paced, therefore guesses should be made very quickly. Today Giorgio and Edoardo decided to play exactly T turns and, in order to quickly verify their answers, they asked you to write a program.

> ☞ Among the attachments of this task you may find a template file `sign.*` with a sample incomplete implementation.

Input

The first line contains the integer T, the number of turns. Each of the next T lines describes a turn, and contains two integers A and B separated by a space.

Output

You need to write T lines, one for every turn, each containing exactly one character: '`+`', '`-`' or '`0`' (all without quotes) depending on the sign of the product of the integers in range chosen during the corresponding turn.

Constraints

- $1 \leq T \leq 100$.
- $-10^{18} \leq A \leq B \leq 10^{18}$.

Scoring

Your program will be tested against several test cases, and your score will proportional to the number of correctly solved test cases.

Note: the sample test cases are not part of the official test cases!

Examples

input	output
2 1 5 -1 1	+ 0
1 -10 -10	-

Explanation

The **first sample case** contains the two turns described in the problem statement.

The **second sample case** has only one turn, and in that turn the player chooses a range formed by one integer only: -10. The product is simply -10.