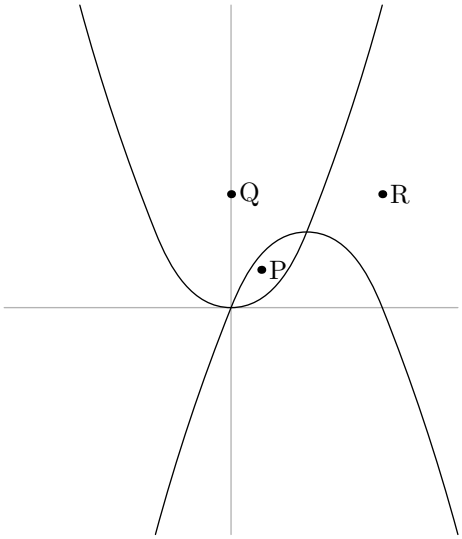
Problem H. Lots of Parabolas

Time limit: 1 second
Memory limit: 512 megabytes

On a plane there is a set of parabolas given by equations in the form $y = a \cdot x^2 + b \cdot x + c$.

Let's consider a point to be located *inside* a parabola if it located above the parabola in case of positive coefficient a, or below the parabola in case of negative a.



On this figure, the point P is located inside both parabolas, the point Q is inside one of them, and the point R is inside none of them.

You need to find any point that is located inside all parabolas. It is guaranteed that such point exists.

Input

The first line contains a single integer n ($1 \le n \le 100\,000$) — the number of parabolas.

Each of the next n lines contains three integers a, b, c ($|a|, |b|, |c| \le 10^9$; $a \ne 0$), describing a parabola $y = a \cdot x^2 + b \cdot x + c$.

Output

Print two real numbers x and y — coordinates of a point located inside all parabolas.

The answer is considered correct if there exists a point at distance at most 10^{-6} from the printed one, which is located strictly inside all parabolas.

Example

standard input	standard output
4 1 2 3 1 -3 -5 -1 3 4 -2 4 6	0.24999999632501932 4.124999990812548