## Solving linear equations

Solve a system of $N(1<N<7)$ linear equations of the form $a_{1}{ }^{*} x_{1}+a_{2}{ }^{*} x_{2}+\ldots+a_{N}{ }^{*} x_{N}=c . a_{i}$ and $c$ are real numbers. A unique solution is assured.

## Input

First line with number $N$, then $N$ lines with $a_{1}, a_{2}, \ldots a_{N}, c$ separated by space.

## Output

The results for $\mathrm{x}_{1}, \mathrm{x}_{2}, \ldots \mathrm{x}_{\mathrm{N}}$ one in each line. The floats should have a precision of 5 digits after the decimal-point.

## Example

Input:
2
123
234
Output:
-1.00000
2.00000

