

Treasure Hunting



Sam is a young treasure hunter located at point $(0, 0)$ and wants to get to the amazing treasure at point (x, y) .

He has a *weird machine* that can transport him from some point (x, y) to point $(x, y) + k(a, b)$, where (a, b) is a direction vector and k is a real number called a *tangent coefficient*. Let (a', b') be the vector *orthogonal* to (a, b) which has the same length and lies counter-clockwise from (a, b) ; Sam can then also move from point (x, y) to point $(x, y) + n(a', b')$, where n is a real number called a *normal coefficient*.

Given a, b, x , and y , find the values of k and n for Sam's journey from point $(0, 0)$ to point (x, y) using the weird machine. Then print the value of k on a new line and the value of n on the subsequent line.

Input Format

The first line contains two space-separated integers denoting the respective values of x and y .
The second line contains two space-separated integers denoting the respective values of a and b .

Constraints

- $1 \leq x, y, a, b \leq 10^9$

Output Format

Find two real numbers, k and n , such that $k(a, b) + n(a', b') = (x, y)$. Then print k as your first line of output and n as your second line of output. Your answer is considered to be correct if its absolute error is $\leq 10^{-4}$.

Sample Input

```
5 3
1 1
```

Sample Output

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4.000000000000
-1.000000000000
```

Explanation

