Frog Dating

Description

Two frogs got to know each other through the internet, and they had a happy talk that they planned a date to meet each other. They are pleased to find that they live in the same latitude, so they both agreed to jump west to meet up. But before they leave, they forgot one very important thing: neither of them asked each other's characteristics. However, frogs are very optimistic, and they believed that as long as they both jump in the same direction, finally they will run into each other. Nevertheless, it is impossible to meet if they are not in the same place at the same time.

Can you write a program to determine whether two frogs can meet finally and at what time they will meet for the first time?

We assume both frogs are at equator at the beginning and assume the cross of equator and prime meridian is the origin of coordinates.

Given that the first frog has a starting coordinate x, a jumping distance m meters, and the second frog has a starting coordinate y, a jumping distance n meters, and the circle length of equator is L meters, you need to compute whether they can meet, and after how many jumps that they meet the first time.

Input

The input contains multiple test cases and terminated by end of file. Each test case contains five integers x, y, m, n, L.
$0 <= x \neq y < 2000000000$，$0 < m, n < 2000000000$，$0 < L < 2100000000$。

Output

The output will consist of one line for each test case.
Print "Impossible" if the frogs never meet each other, otherwise print the smallest number of jumps when they meet.

Sample Input

```
1 2 3 4 5
```

Sample Output

```
4
```

Hints

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Jumps of first frog:  1->4->2(7)->5(10)->3(13)
Jumps of second frog: 2->1(6)->5(10)->4(14)->3(18)
```