TRACK

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Points: 100

Time constraint: 1 s
Memory constraint: 32 MB

Tom and Matt bought bicycles and decided to try them out on a circular track. Their friend Frank decided to observe them. At some point he noticed that their speeds are not necessarily equal. He decided to mark the moment when they meet. It is your task to write a program to help Frank predict the meet.

The length of the track is **L**. The track begins at the index 0, and the fields surrounding 0 are 1 and **L**-1. Tom's and Matt's initial positions are denoted by **T** and **M**, and their velocities are expressed by **VT** and **VM**.

All input data are integers larger than or equal to zero.

Input data

The first line gives the length of the track **L**. (2 <= **L** <= 1 000 000)

The second line gives the initial poisitions **T** and **M** separated by space. (0 <= **T**, **M** <= **L-1**)

The third line gives the velocities **VT** and **VM** separated by space. (0 <= **VT**, **VM** <= 10 000)

Output data

The first and only line of the output is the integer which represents the moment in which Tom and Matt meet for the first time. Since the required output is an integer, it is possible that they will never meet, in which case you should output the following: "**INF**".

Sample test data

INPUT: 875 0 2 1 876	**INPUT:** 1000 42 22 0 0	**INPUT:** 5 0 4 2 1
OUTPUT: INF	**OUTPUT:** 0	**OUTPUT:** 4