

Kangaroo

There are two kangaroos on an x-axis ready to jump in the positive direction (i.e, toward positive infinity). The first kangaroo starts at location x_1 and moves at a rate of v_1 meters per jump. The second kangaroo starts at location x_2 and moves at a rate of v_2 meters per jump. Given the starting locations and movement rates for each kangaroo, can you determine if they'll ever land *at the same location at the same time*?

Input Format

A single line of four space-separated integers denoting the respective values of x_1 , v_1 , x_2 , and v_2 .

Constraints

- $0 \leq x_1 < x_2 \leq 10000$
- $1 \leq v_1 \leq 10000$
- $1 \leq v_2 \leq 10000$

Output Format

Print **YES** if they can land on the same location at the same time; otherwise, print **NO**.

Note: The two kangaroos must land at the same location *after making the same number of jumps*.

Sample Input 0

0 3 4 2

Sample Output 0

YES

Explanation 0

The two kangaroos jump through the following sequence of locations:

1. $0 \rightarrow 3 \rightarrow 6 \rightarrow 9 \rightarrow 12$
2. $4 \rightarrow 6 \rightarrow 8 \rightarrow 10 \rightarrow 12$

Thus, the kangaroos meet after 4 jumps and we print *YES*.

Sample Input 1

0 2 5 3

Sample Output 1

NO

Explanation 1

The second kangaroo has a starting location that is ahead (further to the right) of the first kangaroo's

starting location (i.e., $x_2 > x_1$). Because the second kangaroo moves at a faster rate (meaning $v_2 > v_1$) and is already ahead of the first kangaroo, the first kangaroo will never be able to catch up. Thus, we print *NO*.