

Number Line Jumps

You are choreographing a circus show with various animals. For one act, you are given two kangaroos on a number line 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.

You have to figure out a way to get both kangaroos at the same location at the same time as part of the show. If it is possible, return `YES`, otherwise return `NO`.

For example, kangaroo 1 starts at $x_1 = 2$ with a jump distance $v_1 = 1$ and kangaroo 2 starts at $x_2 = 1$ with a jump distance of $v_2 = 2$. After one jump, they are both at $x = 3$, ($x_1 + v_1 = 2 + 1$, $x_2 + v_2 = 1 + 2$), so our answer is `YES`.

Function Description

Complete the function `kangaroo` in the editor below. It should return `YES` if they reach the same position at the same time, or `NO` if they don't.

`kangaroo` has the following parameter(s):

- x_1, v_1 : integers, starting position and jump distance for kangaroo 1
- x_2, v_2 : integers, starting position and jump distance for kangaroo 2

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

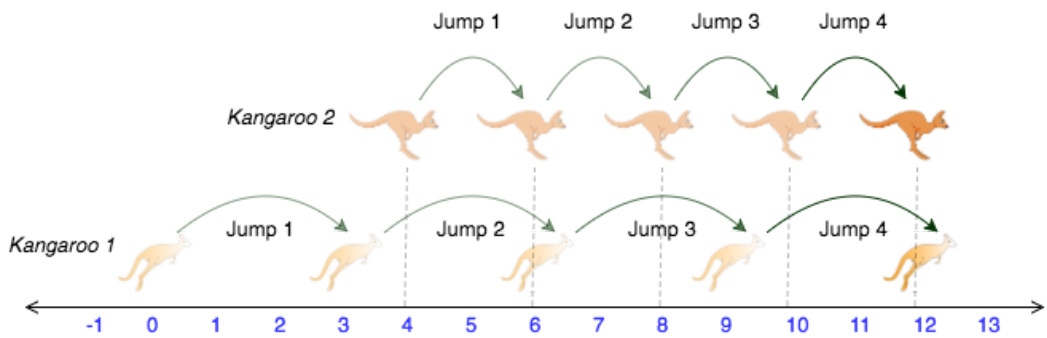
0 3 4 2

Sample Output 0

YES

Explanation 0

The two kangaroos jump through the following sequence of locations:



From the image, it is clear that the kangaroos meet at the same location (number **12** on the number line) after same number of jumps (**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*.