

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**.

Example

$$x_1 = 2$$

$$v_1 = 1$$

$$x_2 = 1$$

$$v_2 = 2$$

After one jump, they are both at $x = 3$, ($x_1 + v_1 = 2 + 1$, $x_2 + v_2 = 1 + 2$), so the answer is **YES**.

Function Description

Complete the function kangaroo in the editor below.

kangaroo has the following parameter(s):

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

Returns

- string: either **YES** or **NO**

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

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

Sample Input 0

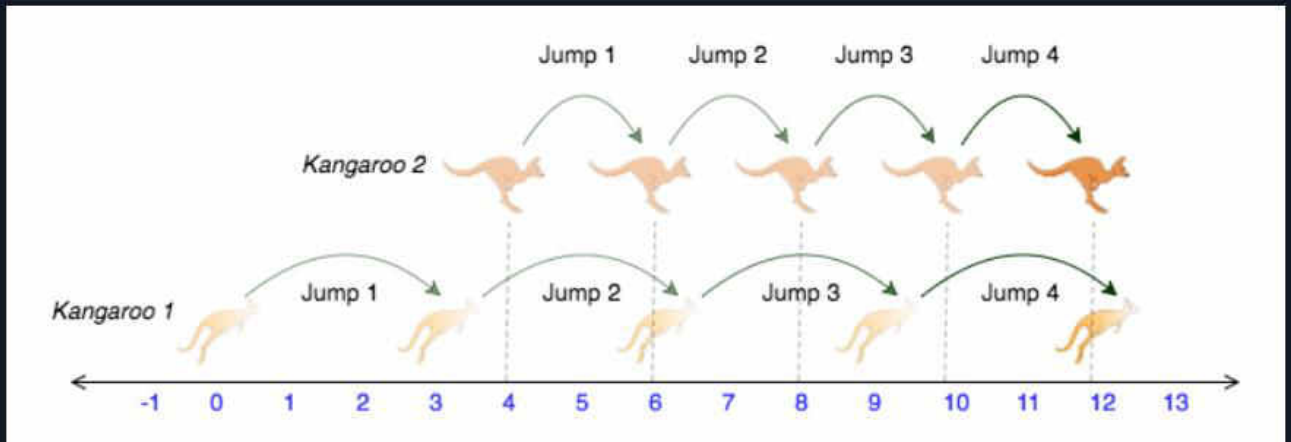
```
0 3 4 2
```

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.