

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 $x1$ and moves at a rate of $v1$ meters per jump.
- The second kangaroo starts at location $x2$ and moves at a rate of $v2$ 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

$x1 = 2$

$v1 = 1$

$x2 = 1$

$v2 = 2$

After one jump, they are both at $x = 3$, ($x1 + v1 = 2 + 1$, $x2 + v2 = 1 + 2$), so the answer is YES.

Function Description

Complete the function kangaroo in the editor below.

kangaroo has the following parameter(s):

- int x1, int v1: starting position and jump distance for kangaroo 1
- int x2, int v2: 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 $x1$, $v1$, $x2$, and $v2$.

Constraints

- $0 \leq x1 < x2 \leq 10000$
- $1 \leq v1 \leq 10000$
- $1 \leq v2 \leq 10000$

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19 #
20 # Complete the 'kangaroo' function below.
21 #
22 # The function is expected to return a STRING.
23 # The function accepts following parameters:
24 # 1. INTEGER x1
25 # 2. INTEGER v1
26 # 3. INTEGER x2
27 # 4. INTEGER v2
28 #
29
30 def kangaroo(x1, v1, x2, v2):
31     if v1 == v2:
32         return 'NO'
33
34     result = (x2 - x1) / (v1 - v2)
35     return 'YES' if result >= 0 and result.is_integer() else 'NO'
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49 > if __name__ == '__main__': ...
67
```

Line: 18 Col: 1

Upload Code as File

Test against custom input

Run Code

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Congratulations

You solved this challenge. Would you like to challenge your friends?



Next Challenge

Test case 23



Test case 24



Test case 25



Test case 26



Test case 27



Test case 28



Test case 29



Compiler Message

Success

Input (stdin)

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1 0 3 4 2

Expected Output

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1 YES