

## E. Vectors

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

At a geometry lesson Gerald was given a task: to get vector  $B$  out of vector  $A$ . Besides, the teacher permitted him to perform the following operations with vector  $A$ :

- Turn the vector by 90 degrees clockwise.
- Add to the vector a certain vector  $C$ .

Operations could be performed in any order any number of times.

Can Gerald cope with the task?

### Input

The first line contains integers  $x_1$  и  $y_1$  — the coordinates of the vector  $A$  ( $-10^8 \leq x_1, y_1 \leq 10^8$ ). The second and the third line contain in the similar manner vectors  $B$  and  $C$  (their coordinates are integers; their absolute value does not exceed  $10^8$ ).

### Output

Print "YES" (without the quotes) if it is possible to get vector  $B$  using the given operations. Otherwise print "NO" (without the quotes).

### Examples

<b>input</b>
0 0 1 1 0 1
<b>output</b>
YES

  

<b>input</b>
0 0 1 1 1 1
<b>output</b>
YES

  

<b>input</b>
0 0 1 1 2 2
<b>output</b>
NO