Problem F: Oneko

Do you know oneko, the on-screen-cat? It is a cat running on your computer screen, chasing your mouse. Each time Lorenz is bored at work, he starts multiple onekos to have the entire group chase the mouse. After some time playing, he tries to let the onekos perform some tricks, like lining up in a straight line with the mouse. To form the line, he moves the mouse to the bottom left corner of the screen. You are given the coordinates of all onekos, can you write a program that checks if they are in one line with the mouse at $(0, 0)$?

Figure F.1: Sample Input 2

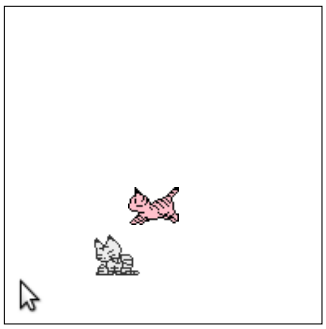

Figure F.2: Sample Input 3

Input

The input consists of:

- one line with one integer n ($1 \leq n \leq 1\,000$), the number of onekos;
- n lines, each with two integers x_i and y_i, where (x_i, y_i) is the position of the i^{th} oneko and $0 \leq x_i, y_i \leq 10\,000$.

Output

Output `yes` if all onekos and the mouse are on one line, `no` otherwise.

Sample Input 1

```
1
1 0
```

Sample Output 1

```
yes
```

Sample Input 2

```
3
2 2
10 10
11 11
```

Sample Output 2

```
yes
```

Sample Input 3

```
2
2 1
3 2
```

Sample Output 3

```
no
```

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