Problem A. Collinearity

Time limit 2000 ms
Mem limit 1048576 kB

Problem Statement

We have N points on a two-dimensional infinite coordinate plane.

The i-th point is at (x_i, y_i).

Is there a triple of distinct points lying on the same line among the N points?

Constraints

- All values in input are integers.
- $3 \leq N \leq 10^2$
- $|x_i|, |y_i| \leq 10^3$
- If $i \neq j$, $(x_i, y_i) \neq (x_j, y_j)$.

Input

Input is given from Standard Input in the following format:

$$
\begin{aligned}
&N \\
&x_1 \ \ y_1 \\
&\vdots \\
&x_N \ \ y_N
\end{aligned}
$$

Output

If there is a triple of distinct points lying on the same line, print `Yes`; otherwise, print `No`.

Sample 1

Input	Output
4 0 1 0 2 0 3 1 1	Yes

The three points $(0, 1), (0, 2), (0, 3)$ lie on the line $x = 0$.

Sample 2

Input	Output
14 5 5 0 1 2 5 8 0 2 1 0 0 3 6 8 6 5 9 7 9 3 4 9 2 9 8 7 2	No

Sample 3

Input	Output
9 8 2 2 3 1 3 3 7 1 0 8 8 5 6 9 7 0 1	Yes