Coding Area

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Examples

Input

4

0 0

0 2

2 2

2 0

Output

4

Explanation:

Given N = 4,

As we can imagine, these points will make a square shape and number of sides in the polygon will be 4.

Example 2

Input

5

0 0

0 3

3 3

3 1

3 0

Output

4

Explanation:

Given N = 5,

The coordinate (3 1) lies on the side made by coordinate (3 0) and (3 3). This will also make a square shape and have 4 sides.

You are given N number of coordinates and your task is to find out how many sides are there in the polygon.

Note: coordinates provided in the input will be in sequential form. Consider that all the coordinates make a close polygon.

05Hr 42Min 24Sec

Your Contest Ends At
2022-03-12 01:19:46 IST

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First line contains an integer N which depicts number of co-ordinates.

Next N lines consist of two space separated integers depicting coordinates in the form of x y.