

PW - G // Vectors n' Shapes

Anish gets to his Calculus and Vectors class on time but since no one does their homework, and Sahan is too afraid to put up questions, Mr. Ing gets triggered if no one puts up work on the blackboard. Today, Ing is extra moody so Anish needs to put up an impressive solution so that Mr. Ing so he doesn't give the whole class a test. Anish decides to do this IOI 2020 problem he found on the dark web:

Given the coordinates of a "convex" polygon in no particular order, output the area of the polygon rounded to the nearest integer.

Input Specification:

The first line will contain the number N , the number of coordinates. The next N lines will contain a coordinate $X Y$ space-separated.

Output Specification:

Output the area of the polygon, rounded to the nearest integer.

Sample Input:

```
4
1 1
-1 1
-1 -1
1 -1
```

Sample Output:

```
4
```

Sample Input:

```
6
0 2
0 -2
2 1
2 -1
-2 -1
-2 1
```

Sample Output:

```
12
```