# Compute the Perimeter of a Polygon



You are given the cartesian coordinates of a set of points in a 2D plane. When traversed sequentially, these points form a Polygon, P, which is not self-intersecting in nature. Can you compute the perimeter of polygon P?

## **Input Format**

The first line contains an integer, N, denoting the number of points.

The N subsequent lines each contain  ${f 2}$  space-separated integers denoting the respective  ${f x}$  and  ${f y}$  coordinates of a point.

#### **Constraints**

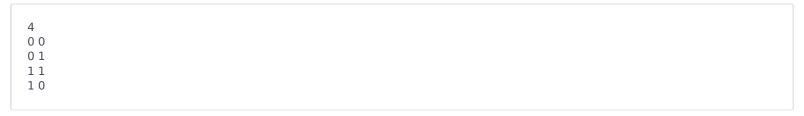
- ullet No ullet points are *coincident*, and polygon P is obtained by traversing the points in a clockwise direction.
- 3 < N < 1000
- $0 \le x, y \le 1000$

# **Output Format**

For each test case, print the perimeter of P (correct to a scale of one decimal place).

Note: Do not add any leading/trailing spaces or units.

# **Sample Input**



### **Sample Output**

4

### **Explanation**

The given polygon is a square, and each of its sides are 1 unit in length. perimeter(P) = 1 + 1 + 1 + 1 = 4, so we print 4 on a new line.