

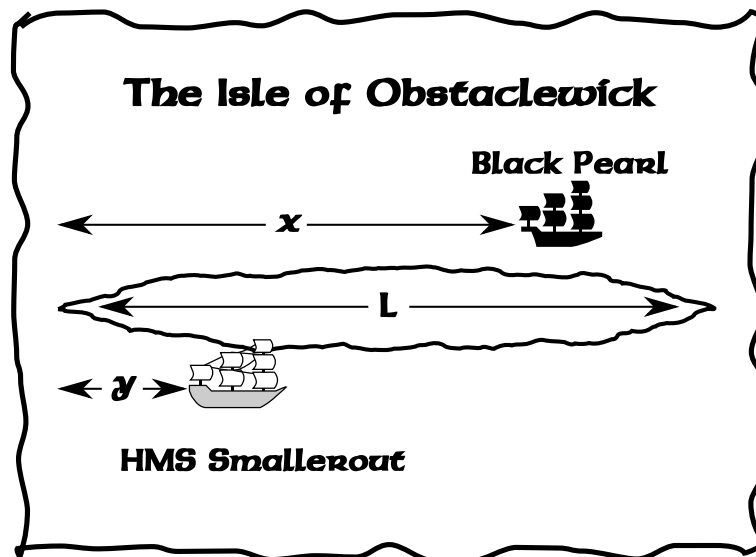
Pirates

Input File: *piratein.txt*
Output File: *pirateout.txt*

Time Limit: 1 second

Yarr! Welcome aboard the *Black Pearl*! I'm Captain Mia Swamp, and this is my First Matey, Growlybird. We've heard you're handy with these computing contraptions, so I'll make you a deal: help us out with a little problem, and we *won't* feed you to the sharks.

You're in? Thought so.



See that map yonder? That long, thin island there is the *Isle of Obstaclewick*. Boring place. All you need to know is that it's L nautical miles long from east to west, and so thin we all just say it has zero width.

Our ship, the *Black Pearl*, is sailing the north coast of the island, X nautical miles from the west point. See the other ship, the one sailing the south coast, Y nautical miles from the west point? That's the *HMS Smallerout*, our target. It may look like a wibbly-wobbly old thing, but it's carrying some of Britain's greatest treasures.

We can sail either way around the Isle of Obstaclewick, approaching the *Smallerout* from either side. What we want *you* to do is tell us which way is shorter. We don't want to overwork the... volunteers... in the galley. So that's your job, landlubber! Write us a program that calculates the shortest distance we have to sail to reach the *Smallerout*!

(continued over ...)

Constraints

To evaluate your solution, the judges will run your program against several different input files. All of these files will adhere to the following bounds:

- $1 \leq L \leq 10\,000$, where L is the length of the Isle of Obstaclewick, given in nautical miles.
- $0 \leq X, Y \leq L$, where X and Y are the positions of the *Black Pearl* and the *HMS Smallerout* respectively, given in nautical miles from the west point of the Isle.

Input

Your program should read from the file `piratein.txt`. The first line of this file will contain the integer L . The second line will contain the integer X , and the third line will contain the integer Y .

Output

Your program should write to the file `pirateout.txt`. Your output file should consist of a single integer: the shortest distance the *Black Pearl* must travel to reach the *HMS Smallerout*, given in nautical miles.

Sample Input 1

```
6
4
1
```

Sample Output 1

```
5
```

Sample Input 2

```
10
10
10
```

Sample Output 2

```
0
```

Sample Input 3

```
9
2
7
```

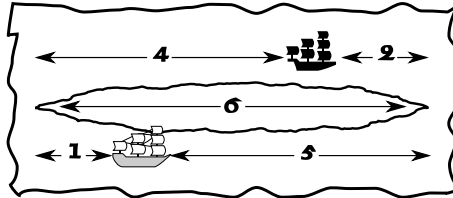
Sample Output 3

```
9
```

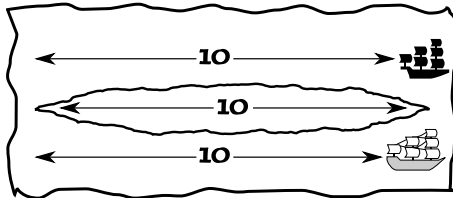
(continued over ...)

Explanation

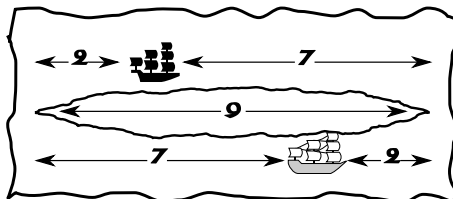
In the first case, the *Black Pearl* can either sail west around the Isle, with a total distance of $4 + 1 = 5$ nautical miles, or east around the Isle, with a total distance of $2 + 5 = 7$ nautical miles. Hence the shortest distance is 5 nautical miles.



In the second case, both the *Black Pearl* and the *HMS Smallerout* are at the east point of the Isle. The distance between them is thus zero.



In the third case, sailing in either direction around the Isle takes 9 nautical miles.



Scoring

The score for each input scenario will be 100% if the correct answer is written to the output file, and 0% otherwise. Don't disappoint or ye'll be walkin' the plank!