



2D Array - DS



by Shafaet

Problem

Submissions

Leaderboard

Discussions

Editorial

Context

Given a 6×6 2D Array, A :

```
1 1 1 0 0 0
0 1 0 0 0 0
1 1 1 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
0 0 0 0 0 0
```

We define an hourglass in A to be a subset of values with indices falling in this pattern in A 's graphical representation:

```
a b c
  d
e f g
```

There are **16** hourglasses in A , and an *hourglass sum* is the sum of an hourglass' values.

Task

Calculate the hourglass sum for every hourglass in A , then print the *maximum* hourglass sum.

Note: If you have already solved the Java domain's *Java 2D Array* challenge, you may wish to skip this challenge.

Input Format

There are **6** lines of input, where each line contains **6** space-separated integers describing 2D Array A ; every value in A will be in the inclusive range of -9 to 9 .

Constraints

- $-9 \leq A[i][j] \leq 9$
- $0 \leq i, j \leq 5$

Output Format

Print the largest (maximum) hourglass sum found in A .

Sample Input

```
1 1 1 0 0 0
0 1 0 0 0 0
1 1 1 0 0 0
0 0 2 4 4 0
0 0 0 2 0 0
0 0 1 2 4 0
```

Sample Output

19

Explanation

A contains the following hourglasses:

```

1 1 1   1 1 0   1 0 0   0 0 0
  1       0       0       0
1 1 1   1 1 0   1 0 0   0 0 0

0 1 0   1 0 0   0 0 0   0 0 0
  1       1       0       0
0 0 2   0 2 4   2 4 4   4 4 0

1 1 1   1 1 0   1 0 0   0 0 0
  0       2       4       4
0 0 0   0 0 2   0 2 0   2 0 0

0 0 2   0 2 4   2 4 4   4 4 0
  0       0       2       0
0 0 1   0 1 2   1 2 4   2 4 0

```

The hourglass with the maximum sum (**19**) is:

```

2 4 4
  2
1 2 4

```

[f](#) [t](#) [in](#)
Submissions: 65566

Max Score: 15

Difficulty: Easy

Rate This Challenge:

☆☆☆☆☆

[More](#)
Current Buffer (saved locally, editable) [🔗](#) [🔄](#)

C


1
2

Line: 1 Col: 1

[📁 Upload Code as File](#)
☐ Test against custom input

Run Code

Submit Code

Congrats, you solved this challenge!

✓ Test Case #0
✓ Test Case #3
✓ Test Case #6

✓ Test Case #1
✓ Test Case #4
✓ Test Case #7

✓ Test Case #2
✓ Test Case #5

[Next Challenge](#)

Copyright © 2017 HackerRank. All Rights Reserved

Join us on IRC at [#hackerrank](#) on freenode for hugs or bugs.

[Contest Calendar](#) | [Interview Prep](#) | [Blog](#) | [Scoring](#) | [Environment](#) | [FAQ](#) | [About Us](#) | [Support](#) | [Careers](#) | [Terms Of Service](#) | [Privacy Policy](#) | [Request a Feature](#)