

♠ Practice





Rank Leaderboard











Dashboard > Tutorials > 30 Days of Code > Day 11: 2D Arrays

Day 11: 2D Arrays



Tutorial Problem Submissions Leaderboard Discussions Editorial

Objective

Today, we're building on our knowledge of *Arrays* by adding another dimension. Check out the Tutorial tab for learning materials and an instructional video!

Context

Given a $\mathbf{6} \times \mathbf{6}$ 2D Array, \mathbf{A} :

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

abc d efg

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 \boldsymbol{A} , then print the maximum hourglass sum.

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

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

Output Format

Print the largest (maximum) hourglass sum found in $m{A}$.

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 0 2 0 0
- 000200

Sample Output

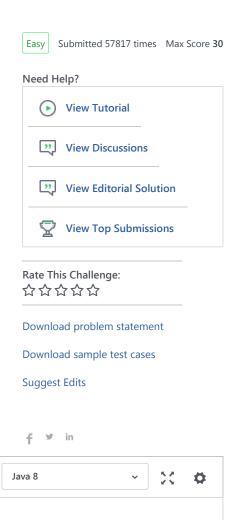
19

Explanation

 ${m A}$ contains the following hourglasses:

```
1\ 1\ 1\ 1\ 1\ 0\ \ 1\ 0\ 0\ \ 0\ 0
        0
111 110 100 000
0 \; 1 \; 0 \quad 1 \; 0 \; 0 \quad 0 \; 0 \quad 0 \; 0 \; 0
       1
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
000 002 020 200
      0 2 4 2 4 4 4 4 0
       0
              2
                     0
 0
0 0 1
      0 1 2 1 2 4
                   2 4 0
```

The hourglass with the maximum sum (19) is:



Current Buffer (saved locally, editable) & 🗘

19 v import java.io.*;
20 import java.util.*;
21 import java.text.*;

1 Upload Code as File

```
22 import java.math.*;
23
   import java.util.regex.*;
24
25 ▼ public class Solution {
26
        public static void main(String[] args) {
27 ▼
            Scanner in = new Scanner(System.in);
28
            int arr[][] = new int[6][6];
29 ▼
30 ▼
            for(int i=0; i < 6; i++){
31 ▼
                for(int j=0; j < 6; j++){
32 ▼
                    arr[i][j] = in.nextInt();
33
34
            }
35
        }
36
    }
37
                                                                                                                   Line: 1 Col: 1
```

Copyright © 2017 HackerRank. All Rights Reserved

Test against custom input

Run Code

Submit Code

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