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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   y   in

Submissions:113467

Max Score:15
Difficulty: Easy

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```java
1  import java.io.*;
2  import java.util.*;
3
4  public class Solution {
5
6      public static void main(String[] args) {
7          /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
8      }
9  }
```

Line: 1 Col: 1

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