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Day 11: 2D Arrays

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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 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.

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 2 0 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

```

Easy

Submitted 57817 times Max Score 30

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Current Buffer (saved locally, editable)

Java 8



```

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

```

```
22 import java.math.*;
23 import java.util.regex.*;
24
25 public class Solution {
26
27     public static void main(String[] args) {
28         Scanner in = new Scanner(System.in);
29         int arr[][] = new int[6][6];
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

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