

Day 11: 2D Arrays

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 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
```