# 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  $6 \times 6$  2D Array, A:

We define an hourglass in  $\boldsymbol{A}$  to be a subset of values with indices falling in this pattern in  $\boldsymbol{A}$ '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  $\bf 6$  lines of input, where each line contains  $\bf 6$  space-separated integers describing 2D Array  $\bf A$ ; every value in  $\bf A$  will be in the inclusive range of  $\bf -9$  to  $\bf 9$ .

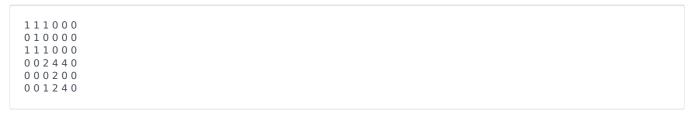
#### **Constraints**

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

## **Output Format**

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

## Sample Input



## **Sample Output**

19

## **Explanation**

 $\boldsymbol{A}$  contains the following hourglasses:

The hourglass with the maximum sum (19) is:

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