Given a 6×6 2D Array, arr:

```
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
```

An hourglass in A is a subset of values with indices falling in this pattern in arr's graphical representation:

```
a b c
  d
e f g
```

There are 16 hourglasses in arr. An hourglass sum is the sum of an hourglass' values. Calculate the hourglass sum for every hourglass in arr, then print the maximum hourglass sum. The array will always be 6×6.

Example

$arr =$

```
-9 -9 -9  1 1 1
 0 -9  0  4 3 2
-9 -9 -9  1 2 3
 0  0  8  6 6 0
 0  0  0 -2 0 0
 0  0  1  2 4 0
```

The 16 hourglass sums are:

```
-63, -34, -9, 12,
-10,   0, 28, 23,
-27, -11, -2, 10,
  9,  17, 25, 18
```

The highest hourglass sum is 28 from the hourglass beginning at row 1, column 2:

```
0 4 3
  1
8 6 6
```

Note: If you have already solved the Java domain's Java 2D Array challenge, you may wish to skip this challenge.

Function Description

Complete the function hourglassSum in the editor below.

hourglassSum has the following parameter(s):

- int arr[6][6]: an array of integers

Returns

- int: the maximum hourglass sum

Input Format

Each of the 6 lines of inputs $arr[i]$ contains 6 space-separated integers $arr[i][j]$.

Change Theme Language Java 8

```
12
13  class Result {
14
15      /*
16       * Complete the 'hourglassSum' function below.
17       *
18       * The function is expected to return an INTEGER.
19       * The function accepts 2D_INTEGER_ARRAY arr as paramete
20       */
21
22      public static int hourglassSum(List<List<Integer>> arr)
23      // Write your code here
24          int mx = Integer.MIN_VALUE;
25          int n = arr.get(0).size();
26
27          for(int i=1; i<5; i++){
28              for(int j=1; j<5; j++){
29  int temp = arr.get(i).get(j) + arr.get(i-1).get(j) + arr.get
    (i-1).get(j-1) + arr.get(i-1).get(j+1) + arr.get(i+1).get(j-
    .get(j+1);
30
31                  mx =Math.max(temp,mx);
32              }
33          }
34
```

Line: 28 Col: 32

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Test against custom input

Congratulations

You solved this challenge. Would you like to challenge your friends?

Next Challenge

Test case 0
Test case 1
Test case 2
Test case 3
Test case 4
Test case 5
Test case 6

Compiler Message

Success

Input (stdin) Download

```
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
```

Expected Output Download

```
19
```