2D Arrays Practice Exercises

```
int[][] ticketInfo = {{25,20,25}, {25,20,25}};
String[][] seatingInfo = {{"Jamal", "Maria"}, {"Jake", "Suzy"},
{"Emma", "Luke"}};
```

1) What is the value at `seatingInfo[2][1];`?

2) `int value = ticketInfo[1][0];`
   what is the value of `value`?

3) `String name = seatingInfo[0][1];`
   What is the value of `name`?

4) Given `int[][] a = {{2, 4, 6, 8}, {1, 2, 3, 4}};`
   What instruction should you type to print the number of rows `a` have?

5) What instruction should you type to print the value at the second row and third column in `a`?

6) Rearrange the following lines of code to find the largest value in a 2D array.

```
(1)      return largest;
(2)      } // end column loop
(3)      int largest = arr[0][0];
(4)      if(arr[r][c] > largest) {
(5)      for(int r = 0; r < arr.length; r++){
(6)      }// end row loop
(7)      } // end if
(8)      public static int getLargest(int[][] arr){
(9)      for(int c = 0; c < arr[r].length; c++){
(10)     } // end method
(11)     largest = arr[r][c];
```

7) what is the value of sum after this code executes?

```
int[][] matrix = {{1,1,2,2},{1,2,2,4},{1,2,3,4},{1,4,1,2}};

int sum = 0;
int col = matrix[0].length - 2;
for (int row = 0; row < 4; row++)
{
   sum = sum + matrix[row][col];
}
```

8) What are the contents of arr after the following code has been executed?

```
int[][] arr = {{3,2,1},{1,2,3}};
int value = 0;
for (int row = 1; row < arr.length; row++) {
   for (int col = 1; col < arr.length; col++) {
      value = arr[row][col];
      if (value % 2 == 1) {arr[row][col] = value + 1;}
      if (arr[row][col] % 2 == 0) {arr[row][col] = value * 2;}
   }
}
```