AP Computer Science 'A' Name _____

Practice Java Quiz #8 Period _____ Date _____

AP Computer Science 'A' Practice Java Quiz #8 (30 Points)

On paper, closed computer, notes, and books

1) Complete the Java method for the signature below. The method takes <u>one</u> argument, a square matrix of integers of any size, and returns a <u>new</u> matrix of the same size with the rows and columns swapped. A square matrix is a two-dimensional array with the same number of rows as columns. For example, looking at the arrays below, if array #1 is passed into the method, then what should be returned is array #2. And if array #3 is passed into the method, then array #4 should be returned. The method should not get any user input or display/print anything or modify the original two-dimensional array in any way.

```
1) 1  4  7  5      2) 1  2  6  8          3) 8  9  3      4) 8  2  5
   2  6  8  9         4  6  7  1             2  0  2         9  0  3
   6  7  1  7         7  8  1  5             5  3  4         3  2  4
   8  1  5  0         5  9  7  0
```

```
public static int[][] swapRowsAndColumns(int[][] square)
{




}
```

2) Complete the Java method for the following signature. The method takes <u>one</u> argument, a rectangular matrix of integers of any size, and <u>returns</u> an integer equal to the sum of the elements along the "border" of the "box" formed by the array. A rectangular matrix is a two-dimensional array with the same number of columns in every row. For example, the first two arrays below should result in a 49 being returned (1 + 4 + 7 + 5 + 9 + 7 + 1 + 7 + 6 + 2), while a 28 should be returned for the third array . Make sure the corner integers are not counted twice. Do not get any user input or display/print anything.

```
1  4  7  5          1  2  6
2  6  8  9          4  6  7          4  1  3
6  7  1  7          7  8  1          1  0  7
                    5  9  7          3  4  5
```

```
public static int borderSum(int[][] matrix)
{




}
```