

Name(s) _____ Period _____ Date _____

Extra Practice - Row-Major Traversal



Check for Understanding

Consider the following code segment.

```
int[][] array2D = {{1, 2, 3, 5},
                  {5, 2, 7, 9},
                  {10, 3, 4, 1},
                  {8, 3, 5, 6}};

for (int row = 0; row < array2D.length; row++) {
    for (int col = 0; col < array2D[0].length; col++) {
        if (array2D[row][col] == num) {
            System.out.print(row + array2D[row][col] + " ");
        }
    }
}
```

What is printed when **num** has the value 5?

- A. 4 1 3
- B. 5 6 8
- C. 6 7 9
- D. 8 5 7
- E. 9 6 8

AP Exam Prep

Consider the following two-dimensional array words.

```
String[][] words = { {"about", "actor", "admit", "agile"},
                    {"badge", "basic", "berry", "bingo"},
                    {"cacti", "cedar", "chair", "close"}};
```

What is the fifth element visited when row-major traversal is performed on **words**?

Extra Practice

Do This: Draw the resulting image on the grid below using the following rules:

- If the value is 0, leave the cell white.
- If the value is 1, fill the cell black.

```
int [][] image = new int[9][9];
for (int row = 0; row < image.length; row++) {
    for (int col = 0; col < image[0].length; col++) {
        image[row][col] = 0;
    }
}

for (int row = 0; row < image.length; row++) {
    for (int col = 0; col < image[0].length; col++) {
        if (row == col) || (row + col == image.length - 1) {
            image[row][col] = 1;
        }
    }
}
```

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

