

## Practice Questions for Chapters 7 and 8

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) What is the representation of the third element in an array called a? 1) \_\_\_\_\_  
A) a(2)                      B) a[2]                      C) a(3)                      D) a[3]

2) If you declare an array `double[] list = {3.4, 2.0, 3.5, 5.5}`, `list[1]` is \_\_\_\_\_. 2) \_\_\_\_\_  
A) 5.5                      B) 3.5                      C) 2.0                      D) undefined                      E) 3.4

3) Which of the following is incorrect? 3) \_\_\_\_\_  
A) `int a[] = new int[2];`  
B) `int a() = new int[2];`  
C) `int[] a = new int(2);`  
D) `int a = new int[2];`  
E) `int[] a = new int[2];`

4) How many elements are in array `double[] list = new double[5]`? 4) \_\_\_\_\_  
A) 0                      B) 4                      C) 5                      D) 6

5) Which of the following statements is valid? 5) \_\_\_\_\_  
A) `char[] c = new char[4]{'a', 'b', 'c', 'd'};`  
B) `double d[] = new double[30];`  
C) `char[] c = new char();`  
D) `int i = new int(30);`  
E) `int[] i = {3, 4, 3, 2};`

6) What is the output of the following code? 6) \_\_\_\_\_

```
int[] myList = {1, 2, 3, 4, 5, 6};

for (int i = myList.length - 2; i >= 0; i--) {
    myList[i + 1] = myList[i];
}

for (int e: myList)
    System.out.print(e + " ");
```

A) 1 1 2 3 4 5                      B) 6 2 3 4 5 1                      C) 1 2 3 4 5 6                      D) 6 1 2 3 4 5                      E) 2 3 4 5 6 1

7) Show the output of the following code:

7) \_\_\_\_\_

```
public class Test {
    public static void main(String[] args) {
        int[] x = {1, 2, 3, 4, 5};
        increase(x);

        int[] y = {1, 2, 3, 4, 5};
        increase(y[0]);

        System.out.println(x[0] + " " + y[0]);
    }

    public static void increase(int[] x) {
        for (int i = 0; i < x.length; i++)
            x[i]++;
    }

    public static void increase(int y) {
        y++;
    }
}
```

- A) 2 1                      B) 0 0                      C) 1 1                      D) 1 2                      E) 2 2

8) Analyze the following code:

8) \_\_\_\_\_

```
public class Test {
    public static void main(String[] args) {
        int[] oldList = {1, 2, 3, 4, 5};
        reverse(oldList);
        for (int i = 0; i < oldList.length; i++)
            System.out.print(oldList[i] + " ");
    }

    public static void reverse(int[] list) {
        int[] newList = new int[list.length];

        for (int i = 0; i < list.length; i++)
            newList[i] = list[list.length - 1 - i];

        list = newList;
    }
}
```

- A) The program displays 1 2 3 4 5 and then raises an `ArrayIndexOutOfBoundsException`.  
B) The program displays 5 4 3 2 1 and then raises an `ArrayIndexOutOfBoundsException`.  
C) The program displays 1 2 3 4 5.  
D) The program displays 5 4 3 2 1.

9) What is the output of the following code?

9) \_\_\_\_\_

```
int[] myList = {1, 2, 3, 4, 5, 6};
for (int i = 1; i < myList.length; i++) {
    myList[i - 1] = myList[i];
}
```

```
for (int e: myList)
    System.out.print(e + " ");
```

- A) 6 2 3 4 5 1      B) 6 1 2 3 4 5      C) 2 3 4 5 6 1      D) 2 3 4 5 6 6      E) 1 2 3 4 5 6

10) Which of the following statements are correct?

10) \_\_\_\_\_

- A) char[2][] charArray = {'a', 'b'}, {'c', 'd'};      B) char[][] charArray = {'a', 'b'};  
C) char[2][2] charArray = {'a', 'b'}, {'c', 'd'};      D) char[][] charArray = {'a', 'b'}, {'c', 'd'};

11) Assume double[][] x = new double[4][5], what are x.length and x[2].length?

11) \_\_\_\_\_

- A) 4 and 4      B) 4 and 5      C) 5 and 5      D) 5 and 4

12) How many elements are array matrix (int[][] matrix = new int[5][5])?

12) \_\_\_\_\_

- A) 30      B) 14      C) 25      D) 20

13) What is the printout of the following program?

13) \_\_\_\_\_

```
public class Test {
    public static void main(String[] args) {
        int[][] values = {{3, 4, 5, 1}, {33, 6, 1, 2}};

        int v = values[0][0];
        for (int row = 0; row < values.length; row++)
            for (int column = 0; column < values[row].length; column++)
                if (v < values[row][column])
                    v = values[row][column];

        System.out.print(v);
    }
}
```

- A) 5      B) 33      C) 1      D) 6      E) 3

14) What is the printout of the following program?

14) \_\_\_\_\_

```
public class Test {
    public static void main(String[] args) {
        int[][] values = {{3, 4, 5, 1}, {33, 6, 1, 2}};

        for (int row = 0; row < values.length; row++) {
            System.out.print(m(values[row]) + " ");
        }
    }

    public static int m(int[] list) {
        int v = list[0];
        for (int i = 1; i < list.length; i++)
            if (v < list[i])
                v = list[i];
        return v;
    }
}
```

A) 1 1

B) 33 5

C) 3 33

D) 5 33

E) 5 6

15) Show the printout of the following code.

15) \_\_\_\_\_

```
public class Test {
    public static void main(String[] args) {
        double[][] m = {{1, 2, 3}, {1.5, 2.5, 3.5}, {0.1, 0.1, 0.1}};
        System.out.println(sum(m));
    }

    public static double sum(double[][] m) {
        double sum = 0;

        for (int i = 0; i < m.length; i++)
            sum += m[i][i];

        return sum;
    }
}
```

A) 4.0

B) 3.6

C) 4

D) 3

E) 3.0