

Score/70

Answer Key

CMPS 12A Winter 2009

Name: _____

QUIZ 3: Feb. 13

Email: _____

NOTES:

- If the answer to a question is an array, write it using the same "curly-brace" notation that you would use to initialize an array in a declaration.

Example of a one-dimensional array: {1, 2, 3}

Example of a two-dimensional array: {{1, 2}, {3, 4}}

- If the answer to a question is an error (for example, a subscript is out of range), just write "Error". You do not need to specify what kind of error it is.

1) (10 points) What will this program print?

```
class PrintOdds {
    public static void main(String[] args) {
        final int SIZE = 3;
        int[] odds = new int[SIZE];
        int oddNumber = 1;
        for (int i = 0; i < SIZE; i++) {
            odds[i] = oddNumber;
            oddNumber += 2;
        }
        myPrint(odds);
    }

    static void myPrint(int[] a) {
        for (int i = a.length - 1; i >= 0; i--)
            System.out.println(a[i] + " ");
    }
} // end of PrintOdds class
```

5
3
1

2) (10 points) Suppose the following code has been executed:

```
int[] powers = new int[500];
```

What is the value of the following expression?

```
powers[250]
```

0

- 3) (10 points) Bill and Hillary have been studying Java arrays this week. Using pair programming, they wrote the following program. What will this program print?

```
class TripleTest {
    static void triple(int[] q) {
        for (int i = 0; i < q.length; i++)
            q[i] = q[i] * 3;
    }

    public static void main(String[] args) {
        int[] t = {1, 2, 3};
        triple(t);
        for (int x:t)
            System.out.println(x);
    }
} // end of TripleTest class
```

3
6
9

- 4) (20 points) Suppose the following code has been executed:

```
int[][] box = { { 7, -4, 0, 9 },
                {-12, 47, 8, 90},
                { 33, 61, 2, 59} };
```

What are the values of the following expressions?

- a) `box[1][1] + box[2][2]`
- b) `box[2][1] > box[1][2]`
- c) `box[0].length`
- d) `box[2][0] % box[2][2]`
- e) `box[2][3] == box[3][2]`
- f) `box.length`
- g) `box[0][0] + box[2][2] == box[0][3]`
- h) `box[1][box[2][2]]`
- i) `box[0][2]`
- j) `box[1, 3]`

- | | |
|----|-------|
| a) | 49 |
| b) | true |
| c) | 4 |
| d) | 1 |
| e) | Error |
| f) | 3 |
| g) | true |
| h) | 8 |
| i) | 0 |
| j) | Error |

5) (10 points) Suppose the following code has been executed:

```
int[][] x = { { 0 } };
```

What are the values of the following expressions?

- a) x[0]
- b) x[1]
- c) x[0, 0]
- d) x[0][0]
- e) x[x.length - 1]

a)	<i>{ 0 }</i>
b)	<i>Error</i>
c)	<i>Error</i>
d)	<i>0</i>
e)	<i>{ 0 }</i>

6) (10 points) Suppose the following code has been executed (after importing java.util.*):

```
ArrayList<String> states = new ArrayList<String>();
states.add("Arizona");
states.add("California");
states.add("Nevada");
states.add("Washington");
states.remove(0);
```

What are the values of the following expressions?

- a) states.size()
- b) states.get(2)
- c) states[3]
- d) states.indexOf("California")
- e) states.isEmpty()

a)	<i>3</i>
b)	<i>Washington</i>
c)	<i>Error</i>
d)	<i>0</i>
e)	<i>false</i>