Programming Output

Name: _____   Date: _11/27/2019_____

Section: ___Student ID 20539914___

For each of the given program segments, read the code, and write the output in the space provided below each program. [*Note:* Do not execute these programs on a computer.]

Unless specified otherwise, for the following questions assume that the code segments are contained within the `main` method of a Java application.

27. What is the output of the following code segment?

```java
int array[] = { 8, 6, 9, 7, 6, 4, 4, 5, 8, 10 };
System.out.println( "Index     Value" );

for ( int i = 0; i < array.length; i++ )
   System.out.printf( "%d          %d\n", i, array[ i ] );
```

Your answer:

28. What is the output of the following code segment?

```java
char sentence[] = { 'H', 'o', 'w', ' ', 'a', 'r', 'e', ' ', 'y', 'o', 'u' };
String output = "The sentence is: ";

for ( int i = 0; i < sentence.length; i++ )
   System.out.printf( "%c ", sentence[ i ] );

System.out.println();
```

Your answer:

New line here:

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29. What is the output of the following code segment?

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

for ( int i = 0; i < array.length; i++ )
{
   for ( int j = 0; j < array [ i ]; j++ )
      System.out.print( "*" );

   System.out.println();
}
```

Your answer:

Newlinehere:

30. What is the output of the following code segment?

```
int array[] = { 3, 2, 5 };

for ( int i = 0; i < 3; i++ )
   array[ i ] *= 2;

for ( int j : array )
   System.out.print( "%d ", j );

System.out.println();
```

Your answer:

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Given the following declaration of a method

```java
public int method1( int... values )
{
   int mystery = 1;

   for ( int i : values )
      mystery *= i;

   return mystery;
}
```

31. What is the output of the following code segment?

```java
System.out.println( method1( 1, 2, 3, 4, 5 ) );
```

Your answer:

Given the following declaration of a method

```java
public int method1( int values[][] )
{
   int mystery = 1;

   for ( int i[] : values )
      for ( int j : i )
         mystery *= j;

   return mystery;
}
```

32. What is the output of the following code segment?

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

System.out.println( mystery( array ) );
```

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Your answer:

Correct the Code

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Determine if there is an error in each of the following program segments. If there is an error, specify whether it is a logic error or a compilation error, circle the error in the program and write the corrected code in the space provided after each problem. If the code does not contain an error, write "no error." [*Note:* There may be more than one error in each program segment.]

33. The following code segment should assign 8 to the element of integer `array` with index 10.

```
1   array( 10 ) = 8;
```

Your answer:

34. The `for` statement that follows should initialize all of `array`'s elements to -1.

```
1   int array[] = new int[ 10 ];
2
3   for ( int i = 0; i < 9; i++ )
4       array[ i ] = -1;
```

Your answer:

Correct the Code

35. Array a should contain all the integers from 0 through 10, inclusive.

```
1   int a[] = new int[ 10 ];
2
3   for ( int i = 0; i < 10; i++ )
4      a[ i ] = i;
```

Your answer:

36. The following code segment should allocate two arrays containing five and six elements, respectively.

```
1   final int arraySize = 5;
2
3   int a[] = new int[ arraySize ];
4
5   arraySize = 6;
6
7   int b[] = new int[ arraySize ];
```

Your answer:

Correct the Code

37. The following code segment should initialize a two-dimensional array, then print its values.

```java
1   int a[][] = new int[ 10 ][ 5 ];
2
3   for ( int i = 0; i < a.length; i++ )
4      for ( int j = 0; j < a[ i ].length; j++ )
5         a[ j ][ i ] = j;
6
7   for ( int i = 0; i < a.length; i++ )
8   {
9      for ( int j = 0; j < a[ i ].length; j++ )
10        System.out.printf( "%d ", a[ j ][ i ] );
11
12     System.out.println();
13  }
```

The compilation error due to misplaced i and j which lead to a out of the bound. The right code is

Your answer:

38. The following code segment should assign the value 10 to the array element that corresponds to the third row and the fourth column.

```java
1   int a[] = new int[ 10 ][ 5 ];
2
3   a[ 2 ][ 3 ] = 10;
```

Your answer: