

I. Show the output of the following Java program fragments.

1)

```
public static void main(String[ ] args)
{
    WS3 ex1 = new WS3( );
    System.out.println(ex1.mystery(9, 10) + "ow");
}
public char mystery(int first, int second)
{
    if (first >= second)
        return 'W';
    else
        return 'H';
}
```

1) (1 pt) **Output**

---

2)

```
public static void main(String[ ] args)
{
    WS3 ex2 = new WS3( );
    System.out.println(ex2.mystery(10, 9) + "ow");
}
public char mystery(int first, int second)
{
    if (first >= second)
        return 'W';
    else
        return 'H';
}
```

2) (1 pt) **Output**

---

**OVER**

II. Each of the *value* returning function definitions below has two errors in it. *Fix* the errors.  
 Note: No instance field variables nor class (static) variables are used below. (2 pts each problem)

```
1) public float ex1(int x, y)
    {
        int a = 0 ;
        a = a + 5 ;
        y = 4.5 + x + a ;
        return ;
    }
```

```
2) public void ex2(int x, int n)
    {
        return 3 * x + y ;
    }
```

III. 1) Show the complete memory simulation to the right of the program given below. (2 pts)

	<u>Memory</u>		
	<u>n</u>	<u>y</u>	<u>result</u>
<pre>public class Example3 {     final static int n = 3;     public static void main(String[ ] args)     {         Example3 ex = new Example3( );         int result;         int y = 2;         result = ex.power(n, y);         System.out.println(n + " to the power of " + y + " is " + result);     }     public int power(int base, int exponent)     {         int product = 1;         while (exponent &gt;= 1)         {             product *= base;             exponent--;         }         return product;     } }</pre>	<p><u>base</u></p>	<p><u>exponent</u></p>	<p><u>product</u></p>

2) What is the output of the program above? (2 pts)

