What is the output produced from each of the following program fragments?

1)
```
a = -14;
b = 0;
if(a < b)
    out.println(a + " " + b);
else
    out.println(a * b);
```

2)
```
a = 50;
b = 25;
count = 0;
sum = 0;
if(a == b)
    out.println(a + " " + b);
else
{
    out.println(a * b);
    count = count + 1;
    sum = sum + a + b;
    out.println(a + " " + b);
}
out.println(sum + " " + count);
```

3)
```
temp = 0;
a = 10;
b = 5;
if(a < b)
    out.println(a + " " + b);
else
    temp = a;
    a = b;
    b = temp;
    out.println(a + " " + b);
out.println(a + " " + b);
```

4) Use the same code above, except change b to the value 21 (b = 21;)

5)
```
a=-8; b=21;
c = a + b;
if( a > b )
{
    a = b;
    c = a * b;
}
else if(a < 0)
{
    a = Math.abs(a);
    b = b - a;
    c = a * b;
}
else
    c = 0;
System.out.println(a + " " + b + " " + c);
```

Find all the errors in the following fragments:

6)
```
if(ch < '.')
    char_count++;
    out.println(ch);
else
    p_count++;
```

7)
```
if(grade < 11);
    out.println("underclassmen");
else
    out.println("upperclassmen");
```

8)
```
if(age = 18);
    out.println("Too old");
    oldCount++;
else (age < 18)
    out.println("Still Good");
    youngCount++;
```

1)
2)
3)
4)
5)

Consider the following method:

```
public static void test(int x)
{
  if(x >= 0)
       if(x < 1000)
       {
         y = 2 * x;
         if(x <= 500)
              x = x /10;
       }
       else
         y = 3 * x;
  else
       y = Math.abs(x);

  out.println(x + " " + y);
}
```

What is the output for the following method calls:

test(381)
test(-21)
test(600)
test(3000)

```
public void method1(int a, int b)
{
  if(a < 0)
    if(b < 0)
      a = b;
  else
    a = b + 10;
  out.println(a + " " + b);
}
public void method2(int a, int b)
{
  if(a < 0)
  {
    if(b < 0)
      a = b;
  }
  else
    a = b + 10;
  out.println(a + " " + b);
}
```

```
public void method3(int a, int b)
{
  if(a >= 0)
    a = b + 10;
  else if(b < 0)
    a = b;
  out.println(a + " " + b);
}

public void method4(int a, int b)
{
  if(a >= 0)
    a = b + 10;
  if(b < 0)
    a = b;
  out.println(a + " " + b);
}
```

method1(-5,5);	method2(-5,5);	method3(-5,5);	method4(-5,5);
method1(-5,-3);	method2(-5,-3);	method3(-5,-3);	method4(-5,-3);
method1(10,8);	method2(10,8);	method3(10,8);	method4(10,8);
method1(10,-4);	method2(10,-4);	method3(10,-4);	method4(10,-4);