

1. Problem statement: Write a program to print the result of the following expressions provided the integer variable

a is 20 and b is 10.

`int b = a-- --a;`

`int c = a--;`

`int d = a>>2;`

`int e = a&b;`

2. code with comments:

```
import java.lang.*;
```

```
public class AddOp {
```

```
    public static void main(String[] args) {
```

```
        int a = 20, b=10;
```

```
        b = a-- --a; // here b= 20 - 18
```

```
        System.out.println(b); // Because post decrement 1 and pre-decrement 1 makes -2  
from 20
```

```
        int c = a--; // value of a is already 18 from the above execution and there is no  
operation after post
```

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

```
        int d = a>>2; // Binary Right Shift Operator. The left operands value is moved right by  
the number of bits specified by the right operand.
```

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

```
        int e = a&b; // Binary AND Operator copies a bit to the result if it exists in both  
operands.
```

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

```
}
```

```
}
```

3. Explanation of the code:

Here b= 20 and a =18. So for the first output statement b=20-18, Because post decrement 1 and pre-decrement 1 makes -2 from 20. Now when executing the second output statement, value of a is already 18 from the above execution and there is no operation after post . Binary Right Shift Operator. The left operands value is moved right by the number of bits specified by the right operand. Binary AND Operator copies a bit to the result if it exists in both operands.

4. Result flow in detail:

Here b= 20 and a =18. So for the first output statement b=20-18, Because post decrement 1 and pre-decrement 1 makes -2 from 20. Now when executing the second output statement, value of a is already 18 from the above execution and there is no operation after post . Binary Right Shift Operator. The left operands value is moved right by the number of bits specified by the right operand. Binary AND Operator copies a bit to the result if it exists in both operands.

5. Output screenshot:

```
C:\windows\system32\cmd.exe

    System.out.println(AddPrg(15, 32));
    ^
symbol:    method AddPrg(int,int)
location:  class AddPrg
1 error

C:\Training_Assignment>javac AddPrg.java

C:\Training_Assignment>java AddPrg
47

C:\Training_Assignment>
C:\Training_Assignment>
C:\Training_Assignment>
C:\Training_Assignment>
C:\Training_Assignment>
C:\Training_Assignment>javac AddOp.java

C:\Training_Assignment>java AddOp
2
18
4
0

C:\Training_Assignment>
```