



1. logicalOps()

- In *main()*, take in two int values from the user; store in variables *x* and *y*
- Call the method *logicalOps()* passing down the int arguments *x* and *y*
- In *logicalOps()* do the following:
 - Using an *if* statement and the logical operator *&&* (logical AND) determine if both numbers are positive
 - Extend the *if* statement to cater for the possibility that both numbers are negative
 - Extend the *if* statement and the logical operator *||* (logical OR) to cater for the possibility that one of the numbers is 0
 - Extend the *if* statement to cater for the possibility that one of the numbers is negative

2. simpleMaths()

- In *main()*, take in two int values from the user; store in variables *x* and *y*
- Call the method *simpleMaths()* passing down the int arguments
- In *simpleMaths()* do the following:
 - Calculate the sum, product, difference and quotient (division) of the two numbers
 - In each case output the results in the format "The sum of 3 and 5 is 8" (assuming 3 and 5 were passed in)

3. modulus()

- In *main()*, take in two int values from the user; store in variables *x* and *y*
- Call the method *modulus()* passing down the int arguments
- In *modulus()* do the following:
 - Determine if *x* is a multiple of *y* and return *true* or *false* depending on that result i.e. if you pass in 8 for *x* and 2 for *y*, you should be returning *true* back to main
 - Output the boolean returned in *main()*

4. incrDecr()

- in the method *incrDecr()*, type in the following and understand the output:

```
int x=0, w=0, y=0, z=0;
x=4;
System.out.println(++x);
System.out.println(x++);
System.out.println(x);
System.out.println(--x);
System.out.println(x--);
System.out.println(x);
```

```
w=20;  
x=10;  
y=-5;  
z=0;  
System.out.println( w == x && y != z );  
System.out.println( w == x || y != z );  
System.out.println( ! ( w == (x + z) ) );
```