

### Set 1

1. Write a program to prompt a user to enter weight in pounds and height in inches. The program should calculate the user's body mass index (BMI) and categorize it as underweight, normal, overweight, or obese, based on the following table from the United States Centers for Disease Control:

BMI Weight Status	
Below 18.5	Underweight
18.5-24.9	Normal
25.0-29.9	Overweight
30.0 and above	Obese

To calculate BMI based on weight in pounds (wt\_lb) and height in inches (ht\_in), use this formula:

$$BMI = \frac{703 * wt\_lb}{ht\_in^2}$$

2. Write a C program to check whether a number is positive, negative or zero using switch case.
3. Find the output of the following code:

```
int main()
{
    int x=5, y=3, z;
    z = ++x;
    y = x++;
    printf("%d", x + y + z);
    return 0;
}
```

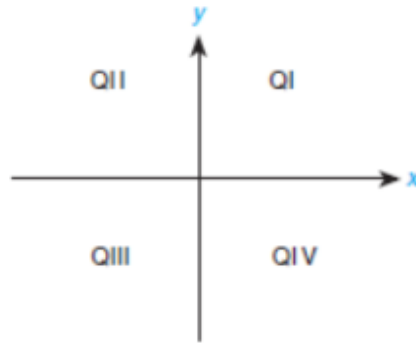
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### Set 2

1. Income tax to be paid by an employee to government as per slabs mentioned below

<u>Income slab</u>	<u>Tax</u>
2.5L - 5.0L	5%
5.0L - 10.0L	20%
Above 10L	30%

- Write a program to read the income of an employee from the user and calculate the income tax to be paid by the employee.
2. Write a program that takes the x and y coordinates of a point in the Cartesian plane and prints a message telling either an axis on which the point lies or the quadrant in which it is found.



### Sample output:

(-1.0, -2.5) is in quadrant III

(0.0, 4.8) is on the y-axis

3. Find the output of the following code:

```
int main()
{
    int x=10, y=2, z;
    z = x>>y;
    printf("%d", z);
    return 0;
}
```