



## C++ Assignments | Fundamentals of Programming -1 | Week2

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1. Take 2 integers input and print the greatest of them

Input 1: a = 5 b = 7

Output 1: second number 7 is the largest.

Input 2: a = 12 b = 1

Output 2 : first number 12 is the largest.

*Note : It is ensured that the two numbers will be different.*

2. Given the radius of the circle, predict whether numerically the area of this circle is larger than the circumference or not.

Input 1: radius = 4

Output 1: Area is greater than circumference.

Explanation:  $\text{area} = 3.14 * 4 * 4 = 50.24 \text{ unit}^2$

$\text{Perimeter} = 2 * 3.14 * 4 = 25.12 \text{ unit}$

Therefore  $\text{area} > \text{perimeter}$ .

3. Any year is input through the keyboard. Write a program to determine whether the year is a leap year or not. (Considering leap year occurs after every 4 years)

Input 1: 1976

Output: yes

Input 2: 2003

Output: no

4. Given the length and breadth of a rectangle, write a program to find whether numerically the area of the rectangle is greater than its perimeter.

Input 1: length = 5 breadth = 7

Output 1: Area is greater than perimeter.

5. Write a program to input sides of a triangle and check whether a triangle is equilateral, scalene or isosceles triangle.

Input : side1 = 5 side2 = 4 side3 = 4

Output: This is an Isosceles triangle.

6. If the marks of A, B and C are input through the keyboard, write a program to determine the student scoring the least marks.

Input 1: A = 23 , B = 34 , C = 71

Output : 'A' has the least marks.

7. Given a point (x, y), write a program to find out if it lies on the x-axis, y-axis or at the origin, viz. (0, 0).

Input 1: 2 0

Output 1: the point lies on the x - axis.

8. Given three points (x1, y1), (x2, y2) and (x3, y3), write a program to check if all the three points fall on one straight line.

Input 1: x1 = 1 , y1 = 2 , x2 = 2 , y2 = 3 , x3 = 3 , y3 = 4

Output 1: All 3 points lie on the same line.

9. Write a C++ program to input any character and check whether it is the alphabet, digit or special character.

Input 1: ch = '9'

Output 1: digit

10. Predict the output of the below code:

```
#include<iostream>

using namespace std;

int main() {
    int a = 500, b, c;
    if (a >= 400)
        b = 300;
    c = 200;
    cout << "value of b and c are respectively " << b << " and " << c;
    return 0;
}
```

*Note:- Please try to invest time doing the assignments which are necessary to build a strong foundation. Do not directly Copy Paste using Google or ChatGPT. Please use your brain 😊.*

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