



Beginner Problem Sheet 1

1. Mary wants to say Hello to your friend named Rasheed. Help her to say "Hello Rasheed".

2. Study a Bit about Operators Refer :

https://www.w3schools.com/cpp/cpp_operators.asp

Study these types of Operators (Arithmetic, Assignment, Comparison, Logical)

1. Write a Program to add two numbers taken as input and print their result.

2. Write a Program to Divide two numbers taken as input and print the Quotient and Remainder.

3. What is Conditional Operator Refer:

https://www.tutorialspoint.com/cplusplus/cpp_conditional_operator.htm . Write a Program to find Greater of 2 numbers taken as input using Ternary Operator.

4. Study a Bit about Operator Precedence and Associativity. Refer:

<https://www.tutorialspoint.com/Cplusplus-Operators-with-Precedence-and-Associativity> .

Revise the BODMAS rule for solving complex Operations.

5. Evaluate the following expressions without Running in Program.

Question 1:

```
a=8, b=4, c=2, d=1, e=5, f=20
a+b- (c+d) *3%e+f/9
```

Question 2:

```
a=8, b=3, c=2, d=3, e=2, f=11
a-b || (a-b*c)+d&&e-f%3
```

Question 3:

```
a=17, b=5, c=6, d=3, e=5
a%6-b/2+(c*d-5)/e
```

Question 4:

```
a=4, b=5, c=6, d=3, e=5, f=10
a*b-c/d<e+f
```

6. Write a C++ program to swap value of two variables:

—> Using third Variable.

—>Without Using Third Variable

7. Study about Type Casting in C++. REFER : <https://www.youtube.com/watch?v=AICXRKdsQcM> and <https://www.youtube.com/watch?v=xi2wf0Zy2Y4>

8. Write a Program to calculate Simple Interest.

9. What is ASCII in C++. Study about important ASCII values. REFER : <https://www.youtube.com/watch?v=ka3f7fJktCg> Remember ASCII values for Small Alphabets(a-z), Capital Alphabets(A-Z), Numbers(0-9).

10. Study about setprecision(). REFER : <https://cplusplus.com/reference/iostream/setprecision/>

11. Write a program to find the Area of a Circle taking radius as input. Print the final Result upto 3 decimal places.

12. Study a bit about C++ Math inbuilt methods. Refer here : https://www.w3schools.com/cpp/cpp_math.asp Must cover max(), min(), pow(), sqrt(), abs(), fabs(), floor(), ceil(), exp(), log()

13. Write a program to find distance between two Coordinate points. Take (x1,y1) and(x2,y2) as input.

14. Write a program to compute X^n where X and n are integers taken as input.

15. Write a C++ program to find maximum and minimum between two Numbers using `max()` and `min()` functions.
16. Write a C++ program to take two numbers 'a' and 'b' as input and return $|a-b|$ where $|x|$ is absolute value of x.
17. Write a C++ program to divide two numbers 'a' and 'b' and print the Greatest Integer Value and Smallest Integer Value. Hint : Greatest Integer Value is called FLOOR value and Smallest Integer is called CEIL value.