Practical work 2

Exercice 1 :

1. Perform the trace of the following program (Memory + Screen)

```
#include<iostream >
using namespace std;
int main(){
int a = 7;
double b = a / 3;
int c = 9;
c = a % c;
a=b;
b=a;
cout << 2*a;
cout << "b";
return 0;
}
```

2. Modify the previous program so that it allows the values of a and b to be swapped.

Exercice 2 :

Let the mathematical function f be defined as follows:

$$f(x) = (2x + 3)(3x^2 + 2).$$

Write a C++ program which allows you to read an integer x then calculate the image of x given by the function f.

Exercice 3 :

During a promotional operation, a store applies a 10% reduction on all components. Write a program that reads the price of a component from the keyboard and displays the new price calculated by applying the discount.

Exercice 4 :

Write a program to calculate and print the perimeter and area of a rectangle. Take the length (l) and width (w) as input from the user.

Exercice 5 :

Write a C++ program that:
1. Reads three integer variables A, B and C.
2. Calculate the average of these three variables.
3. Transfers the value of A to B, the value of B to C, and the value of C to A.

Example: