Q1. Write a C++ program (by using function) that takes the user's year of birth as input and returns their age.

Q2. Write a C++ program (by using function) to check if the entered password is correct. If it's "secure123", print "Access granted", otherwise "Access denied".

Q3. Write a C++ program (by using function) that will allow a user to input 2 numbers and perform basic arithmetic operations including **addition**, **subtraction**, **multiplication**, and **division** for these two numbers.

Output:

```
Input first number
8
Input Second number
9
8 + 9 = 17
8 - 9 = -1
8 * 9 = 72
8 / 9 = 0.888889
```

Q4.: Update the Q3 to ask user to choose specific operation to perform.
Output:

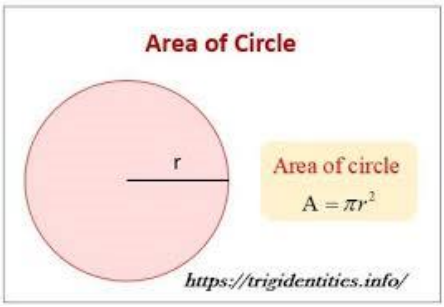
```
Input first number
6
Input Secondnumber
7
Input one of + - * /
/
6 / 7 = 0.857143
```

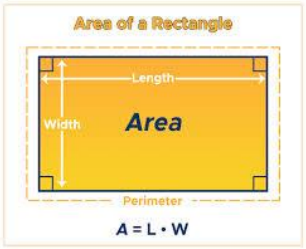
Q5.: Write a C++ program (by using function) that will allow a user to input an integer and the function should check the number is even or odd.

Q6: Write a C++ program (using functions) that allows a user to input a double. The function should check if the number is positive or negative. **The program should prompt the user to continue checking other integers or stop the program**.

Q7: Write a C++ function that count how many vowels in a text that user inputs it.

Q8. Write an overloaded function that calculates the area of a circle (given the radius) and a rectangle (given length and width).





Q9. Imagine the company has requested the development of a menu application with three options:

```
Welcome to our service!
Would you like to order something? (yes/no): yes
Main Menu:
1. Start
2. Help
3. Exit
Please enter the number of your choice: 1

You selected: Start
```

1. **Start**: If the customer selects this option, present a list of food options.

```
Food Menu:
1. Burger - $5.99
2. Pizza - $8.49
3. Salad - $4.99
```

2. **Help**: If the customer selects this option, provide instructions on how to use the app.

```
You selected: Help

Help Center - Frequently Asked Questions:
Q1: How do I order food?
   A: Choose option 1 (Start) to see the food menu.
Q2: What happens if I choose Exit?
   A: The program will close and thank you for visiting.
Q3: Can I see the menu again?
   A: Just restart the program to see the menu again.
```

3. **Exit**: If the customer selects this option, terminate the program.

```
You selected: Exit

Thank you for visiting! Have a great day!
```

Q10. Evaluate the output for the code below. If it is incorrect, correct it.

void Cube(double y)
{
y = y*y*y;
}
 	
int main ()
{
double g = 4.0.
Cube(g);
cout << g<<endl;
system("pause");
return 0;
}	

int foo(int x)
{
return x+1;
}
 	
int main()
{
int x = 13;
int y = 16;
cout << foo(y) << endl;
return 0;
}	

```
void Unit_Array (int* a, int n)
{
 for (int j = 0; j < n; j++)
 {
 a[j] = 1;
 }
}
int main()
{
 int H[4] = {10, 20, 30, 40 };
 Unit_Array (H, 4);
 cout << K[2] << endl;
 system("pause");
}
```

```
#include <iostream>
using namespace std;
void bar(int* a)
{
 for (int j = 0; j < 4; j++)
 {
 a[j] = j*100;
 }

}
int main()
{
 int a[4] = {10, 20, 30, 40 };
 bar(a);
 for (int i = 3; i >= 0; i--)
 {
 cout << a[i] << " ";
 }
 system("pause");
}
```