# Exercises on Functions

## Exercise 1: Identify the Function Type

Identify which part is the library function and which is the user-defined function:

#include <iostream>  
#include <cmath> // for the library function  
  
using namespace std;  
  
void greet();  
  
int main() {  
 double result = sqrt(16.0);   
 cout << "Square root of 16 is: " << result << endl;  
  
 greet(); // Calling the user-defined function  
 return 0;  
}  
  
void greet() {  
 cout << "Hello from greet function!" << endl;  
}

## Exercise 2: Library Function Usage

Complete the program by entering a number and observing the use of the library function:

#include <iostream>  
#include <cmath>  
  
using namespace std;  
  
int main() {  
 double num, powered;  
 cout << "Enter a number to powered: ";  
 cin >> num;  
  
 squared = pow();  
 cout << "The power of " <<endl;  
  
 return 0;  
}

## Exercise 3: Basic Function Definition

This exercise introduces how to declare and define a basic function:  
Define a function named greet that takes no parameters and outputs "Hello, World!". Then, call this function from main().

#include <iostream>  
  
using namespace std;  
  
// Function declaration  
  
  
int main() {  
 greet(); // Call the greet function  
 return 0;  
}  
  
// Function definition

## Exercise 4: Function with Parameters

Write a function called displaySum that takes two integer parameters and displays their sum. Test this function by calling it with any two numbers from main().

#include <iostream>  
  
using namespace std;  
  
// Function that takes two integers and displays their sum  
  
  
int main() {  
 int x = 5, y = 10;  
 displaySum(x, y); // Call the function with two numbers  
 return 0;  
}  
  
// Function definition

## Exercise 5: Return a Value

Create a function named triple that takes an integer as a parameter, triples it, and returns the result. Call this function in main() with a test value, and display the result.

#include <iostream>  
  
using namespace std;  
  
// Function that triples the given integer and returns the result  
  
  
int main() {  
 int value = 4;  
 int result = triple(value); // Call the function and store the result  
 cout << "Triple of " << value << " is: " << result << endl;  
 return 0;  
}  
  
// Function definition