

QUICK REVIEW

1. Functions are like miniature programs and are called modules.
2. Functions enable you to divide a program into manageable tasks.
3. The C++ system provides the standard (predefined) functions.
4. To use a standard function, you must:
 - i. Know the name of the header file that contains the function's specification,
 - ii. Include that header file in the program, and
 - iii. Know the name and type of the function and number and types of the parameters (arguments).
5. There are two types of user-defined functions: value-returning functions and void functions.
6. Variables defined in a function heading are called formal parameters.
7. Expressions, variables, or constant values used in a function call are called actual parameters.
8. In a function call, the number of actual parameters and their types must match with the formal parameters in the order given.
9. To call a function, use its name together with the actual parameter list.
10. A value-returning function returns a value. Therefore, a value-returning function is used (called) in either an expression or an output statement or as a parameter in a function call.
11. The general syntax of a user-defined function is:

```
functionType functionName(formal parameter list)

{

    Statement

}
```

12. The line `functionType functionName(formal parameter list)` is called the function heading (or function header). Statements enclosed between braces (`{` and `}`) are called the body of the function.
13. The function heading and the body of the function are called the definition of the function.
14. If a function has no parameters, you still need the empty parentheses in both the function heading and the function call.
15. A value-returning function returns its value via the `return` statement.
16. A function can have more than one `return` statement. However, whenever a `return` statement executes in a function, the remaining statements are skipped and the function exits.
17. A `return` statement returns only one value.
18. A function prototype is the function heading without the body of the function; the function prototype ends with the semicolon.
19. A function prototype announces the function type, as well as the type and number of parameters, used in the function.
20. In a function prototype, the names of the variables in the formal parameter list are optional.
21. Function prototypes help the compiler correctly translate each function call.

22. In a program, function prototypes are placed before every function definition, including the definition of the function main.
23. When you use function prototypes, user-defined functions can appear in any order in the program.
24. When the program executes, the execution always begins with the first statement in the function main.
25. User-defined functions execute only when they are called.
26. A call to a function transfers control from the caller to the called function.
27. In a function call statement, you specify only the actual parameters, not their data type or the function type.
28. When a function exits, the control goes back to the caller.