What is a Function in Programming?

Worksheet

A function is a self-contained block of code that you can call by name, optionally passing it input values, and which can send a result back to the code that called it.

Questions

1. A function double(n) returns n*2. What does double(9) return?

A) 9
B) 11
C) 18
D) 81

2. What is the term for the value a function sends back to its caller?

A) Parameter
B) Argument
C) Return value
D) Loop

3. Why are functions useful in programming?

A) They make code run slower
B) They let you repeat logic without rewriting it
C) They remove the need for variables
D) They only work with numbers

4. In toFahrenheit(c) { return c*9/5+32 }, what is c?

A) The function's name
B) A parameter representing the input Celsius value
C) The return value
D) A comment

5. Write a function that converts Celsius to Fahrenheit and call it with 20C.

6. A function add(a, b) returns a + b. What does add(7, 5) return?

7. A function square(n) returns n*n. What is square(6)?

8. Define: What is a function?

9. Define: What is a parameter?

10. Define: What is a return value?

Answer Key

1. C) 18 - double(9) computes 9*2 = 18.

2. C) Return value - The return value is what the function outputs after running.

3. B) They let you repeat logic without rewriting it - Functions let you reuse the same logic anywhere it's needed, without duplicating code.

4. B) A parameter representing the input Celsius value - c is the parameter that holds whatever Celsius value is passed in when the function is called.

5. Define: function toFahrenheit(c) { return c*9/5+32 } Call: toFahrenheit(20) Execute: 20*9/5+32 = 36+32 Return: 68 - so 20C equals 68F

6. Call add(7, 5) passes a=7, b=5 Execute the body: a + b = 7 + 5 Return 12 The function call add(7,5) evaluates to 12

7. Call square(6) passes n=6 Execute: n*n = 6*6 Return 36 square(6) evaluates to 36

8. A named, reusable block of code that performs a task and can return a value.

9. A named input variable a function accepts when it's called, e.g., c in toFahrenheit(c).

10. The output a function sends back to the code that called it.