

# CHAPTER 9

## VALUE-RETURNING FUNCTIONS

The answers for the Value-Returning Functions section are located at the end of the section.

1. Write a C++ statement that assigns the square root of the number 9 to a double variable named `sqRtAnswer`.
2. Write a C++ statement that raises the number stored in a double variable named `num` to the fifth power and assigns the result to a double variable named `answer`.
3. Write a C++ statement that assigns a random integer from 100 through 199 to an `int` variable named `randAnswer`.
4. Write the code for the `resetTotals` function. The function should assign the number 0.0 to the following four double variables: `totalNorthSales`, `totalSouthSales`, `totalEastSales`, and `totalWestSales`. It then should return the letter Y to indicate that the totals were reset. Then write the code to call the function, assigning its return value to a `char` variable named `resetComplete`.
5. Write the code for a function named `calcSalesTax`. The function receives two double variables *by value*. Use the following names for the parameters: `sales` and `taxRate`. The function should calculate and return the sales tax. Then write the code to call the function, passing it the variables `salesAmt` and `rate`. Assign the function's return value to a double variable named `tax`.
6. Write the code for the `calcSum` function, which receives two integers *by value*. The procedure should add the first integer to the second integer and then return the result as an integer. Use the following names for the parameters: `num1` and `num2`. Then write the code to call the function. Pass the `firstNum` and `secondNum` variables. Assign the function's return value to the `sum` variable.
7. Write the code for a function named `getNetIncome`. The function receives two double variables *by value*. Use the following names for the parameters: `revenue` and `expenses`. The function should calculate and return the net income. Then write the code to call the function. Pass the `storeRev` and `storeExp` variables. Assign the function's return value to the `netIncome` variable.

## ANSWERS FOR THE VALUE-RETURNING FUNCTIONS SECTION

1. `sqRtAnswer = sqrt(9);`
2. `answer = pow(num, 5);`
3. `randAnswer = 100 + rand() % (199 - 100 + 1);`

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4. char resetTotals()
{
    totalNorthSales = 0.0;
    totalSouthSales = 0.0;
    totalEastSales = 0.0;
    totalWestSales = 0.0;
    return 'Y';
} //end of resetTotals function
resetComplete = resetTotals();

5. double calcSalesTax(double sales, double taxRate)
{
    return sales * taxRate;
} //end of calcSalesTax
tax = calcSalesTax(salesAmt, rate);

6. int calcSum(int num1, int num2)
{
    return num1 + num2;
} //end of calcSum
sum = calcSum(firstNum, secondNum);

7. double getNetIncome(double revenue, double expenses)
{
    double net = 0.0;
    net = revenue - expenses;
    return net;
} //end of getNetIncome function
netIncome = getNetIncome(storeRev, storeExp);

```