

2. What is the output of the following C++ program?

```
#include <iostream>
using namespace std;
void f(int a, int &b)
{
    cout << a << " " << b << endl;
    a = a + 2;
    b = b + 3;
    cout << a << " " << b << endl;
}
int main()
{
    int x = 4, y = 5;
    cout << x << " " << y << endl;
    f(x, y);
    cout << x << " " << y << endl;
    return 0;
}
```

3. What are the five basic built-in C++ data types?
4. What are the differences between the Python conditional statement and the corresponding C++ conditional statement?
5. What are the differences between the Python and C++ **while** loop statements?
6. What are the differences between the Python **list** type and C++ arrays?
7. What is the purpose of a C++ header file?
8. What do the terms *scope* and *lifetime* mean with respect to variables?

Programming Exercises

1. Write a C++ program that prints the multiplication table for all possible products of the numbers 0 through 9.
2. Write a C++ program that inputs the number of cents (an integer between 0 and 99) and outputs the number of quarters, dimes, nickels, and pennies that add up to that amount and minimizes the number of coins needed.

- 04/04/2018 - RS000000000000000000000000381359 - Data Structures and Algorithms Using Python and C++