Part A

2. cd Desktop, cd CSCI60, g++ Lab1.cpp, ./a.out

Part B

2. 7, 7, 2, 10, 1, 2, 7, 7, 9, 5

3. Pre-increment operators increment a variable’s value before it is used in an expression, while post-increment operators increment a variable’s value after it is used in an expression.

Part C

1. To do this, we could make a for loop that takes in the given number, and then loops through from 1 to the given number, using % to check divisibility. If any of the values return 0, then we know it is not prime. Else, we know it is prime.

#include <iostream>

using namespace std;

int main() {

    int number;

    cout << "Enter a number: ";

    cin >> number;

    if (number <= 1) return false; // 0 and 1 are not prime numbers

    for (int i = 2; i <= √(number); i++) {

        if (number % i == 0) {

            cout >> "Your number is not prime";

            return 0; // find factor, not prime number, return false

        }

    }

    cout >> "Your number is prime";

    return 0; // factor not found, it is prime number return true

}

#include <iostream>

using namespace std;

// find whether it is a prime number or not

bool isPrime(int number) {

    if (number <= 1) return false; // 0 and 1 are not prime numbers

    for (int i = 2; i < number; i++) {

        if (number % i == 0) {

            return false; // find factor, not prime number, return false

        }

    }

    return true; // factor not found, it is prime number return true

}

int main() {

    int number;

    cout << "Enter a number: ";

    cin >> number;

    if (isPrime(number)) {

        cout << number << " is a prime" << endl;

    } else {

        cout << number << " is not a prime" << endl;

    }

    return 0;

}

Part D

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4,

#include <iostream>

using namespace std;

int main(){

for (int i = 0; i<5; i++){

for (int a = 3; a > 0; a--){

cout << i\*a << " ";

}

}

}