Write, compile, and run a C++ program to calculate the distance between two points with the coordinates (7, 12) and (3, 9). Use the fact that the distance between two points with the coordinates (x1, y1) and (x2, y2) is given by this formula:

After verifying that program works, use cin to input coordinates (-10,3) and (21,5)

Calculate distance for this new pair of points.

Bonus point: Consider first line (7,12),(3,9) – now find the y coordinate of the point that has its x = 8 and is the same distance to point (3,9) as (7,12). Write the code to find y.

#include <pch.h>

#include <iostream>

#include <cmath>

using namespace std; //I removed references to any attempt at the bonus. I think that’s what was confusing.

int main()

{

double x1 = 7, y1 = 12, x2 = 3, y2 = 9 // setting coordinate values

double distance;

distance = sqrt(pow(x2 - x1, 2) + pow(y2 - y1, 2)); //calculates distance for first part of homework

cout << "The distance between coordinates (" << x1 << ", "

<< y1 << ") and (" << x2 << ", " << y2 << ") is: " << distance << endl; // answer 1

cout << "Please input your coordinates, separated by spaces: " << endl;

cin >> x1 >> y1 >> x2 >> y2;

distance = sqrt(pow(x2 - x1, 2) + pow(y2 - y1, 2));

cout << "The distance between (" << x1 << ", " << y1 << ") and ("

<< x2 << ", " << y2 << ") is: " << distance << endl; // answer 2

x1 = 7, y1 = 12, x2 = 3, y2 = 9;

system("pause");

return 0;

}