1. Copy the question and the C++ file from the Displaying the Value of Pi folder.  Create ch3cw\_1 Solution file and drag the CPP file into the solution.

|  |  |  |
| --- | --- | --- |
| Input | Process | Output |
| None | 1. Declare constant 2. Display PI with different precision values | PI with different precision values |

Code-

//Displaying the value of PI with different precision values

#include <iostream>

#include <iomanip>

using namespace std;

int main()

{

//declare constant

const double PI = 3.141593;

//display PI with different precision values

cout << fixed;

cout << setprecision(0) << PI << endl;

cout << setprecision(1) << PI << endl;

cout << setprecision(2) << PI << endl;

cout << setprecision(3) << PI << endl;

cout << setprecision(4) << PI << endl;

cout << setprecision(5) << PI << endl;

cout << setprecision(6) << PI << endl;

cout << setprecision(7) << PI << endl;

system("pause");

return 0;

} //end of main function

2.  Copy the question and the C++ file from the Calculating the Volume of a Pool folder.  Create ch3cw\_2 Solution file and drag the CPP file into the solution.

|  |  |  |
| --- | --- | --- |
| Input | Process | Output |
| customer  length  width  depth | 1. Declare variables 2. Get input for variables 3. Calculate volume volume = area \* depth 4. Display output | customer  volume |

Code-

//Calculate the volume of a rectangular pool

#include <iostream>

#include <iomanip>

#include <string>

using namespace std;

int main()

{

//declare variables

double length = 0.0;

double width = 0.0;

double depth = 0.0;

double area = 0.0;

double volume = 0.0;

string customer = "";

//enter input items

cout << "Enter the name of the customer: ";

getline(cin, customer);

cout << "Enter the length of the rectangular pool: ";

cin >> length;

cout << "Enter the width of the rectangular pool: ";

cin >> width;

cout << "Enter the depth of the rectangular pool: ";

cin >> depth;

//calculate area and volume

area = width \* length;

volume = area \* depth;

//display output items

cout << "Customer: " << customer << endl;

cout << fixed << setprecision(2) << "Volume: " << volume << endl;

system("pause");

return 0;

} //end of main function

3. Create a C++ program that prompts the user to enter two numbers.     Create ch3cw\_3 Solution and ch3cw\_3.cpp file.

The program calculates and displays the sum and the difference of these two numbers.

The program calculates the quotient and the remainder of the two numbers.

|  |  |  |
| --- | --- | --- |
| Input | Process | Output |
| num1  num2 | 1. Declare variables 2. Get input 3. Calculate sum 4. Calculate difference 5. Display output | sum  difference |

Code-

//Dylan Nguyen, 9/3/2020, Ch.3 classwork #3

#include <iostream>

using namespace std;

int main()

{

//declare variables num1 and num2

double num1, num2, sum, difference;

cout << "Enter first number:\n";

cin >> num1;

cout << "Enter second number:\n";

cin >> num2;

//process

sum = num1 + num2;

difference = num1 - num2;

//output

cout << num1 << " + " << num2 << " = " << sum << endl;

cout << num1 << " - " << num2 << " = " << difference << endl;

system("pause");

return 0;

}