2020FA CSC 234 0001

M2LAB1

These questions are identical to those listed within the ZyLabs. They are provided for your convenience.

Question 6.19

One lap around a standard high-school running track is exactly 0.25 miles. Write a program that takes a number of miles as input, and outputs the number of laps.

Output each floating-point value with two digits after the decimal point, which can be achieved by executing
`cout << fixed << setprecision(2);` once before all other cout statements.

Ex: If the input is:

```
1.5
```

the output is:

```
6.00
```

Ex: If the input is:

```
2.2
```

the output is:

```
8.80
```

Your program must define and call a function:
`double MilesToLaps(double userMiles)`

Question 6.20

A pedometer treats walking 2,000 steps as walking 1 mile. Write a program whose input is the number of steps, and whose output is the miles walked.

Output each floating-point value with two digits after the decimal point, which can be achieved by executing

`cout << fixed << setprecision(2);` once before all other cout statements.

Ex: If the input is:

```
5345
```

the output is:

```
2.67
```

Your program must define and call a function:
`double StepsToMiles(int userSteps)`

Question 6.22

Write a function DrivingCost() with input parameters drivenMiles, milesPerGallon, and dollarsPerGallon, that returns the dollar cost to drive those miles. All items are of type double. If the function is called with 50 20.0 3.1599, the function returns 7.89975.

Define that function in a program whose inputs are the car's miles/gallon and the gas dollars/gallon (both doubles). Output the gas cost for 10 miles, 50 miles, and 400 miles, by calling your DrivingCost function three times.

Output each floating-point value with two digits after the decimal point, which can be achieved by executing
`cout << fixed << setprecision(2);` once before all other cout statements.

Ex: If the input is:

```
20.0 3.1599
```

the output is:

```
1.58 7.90 63.20
```

Your program must define and call a function:
`double DrivingCost(double drivenMiles, double milesPerGallon, double dollarsPerGallon)`