Problem 1. Miles per gallon

A car holds 15 gallons of gasoline and can travel 375 miles before refueling. Write a program that calculates the number of miles per gallon the car gets. Display the result on the screen.

Hint: Use the following formula to calculate miles per gallon (MPG):

MPG = Miles_Driven/Gallons_of_Gas_Used

(Must start variables with lower case, and use proper indentation).

USE THE NEXT TEMPLATE (MANDATORY):

```cpp
//DO NOT MODIFY THIS SECTION
#include <iostream>
using namespace std;
int main()
{
    double carHold, carTravel, milesPerGalon;
//ADD YOUR CODE FROM HERE




}
```

```cpp
1   /* A car holds 15 gallons of gasoline and can travel 375 miles before refueling. Write a program
        that calculates the number of miles per gallon the car gets. Display the result on the screen.
2
3    Hint: Use the following formula to calculate miles per gallon (MPG):
4
5    MPG = Miles_Driven/Gallons_of_Gas_Used
6
7    (Must start variables with lower case, and use proper indentation).*/
8
9   //DO NOT MODIFY THIS SECTION
10  #include <iostream>
11  using namespace std;
12  int main()
13  {
14      double carHold, carTravel, milesPerGalon;
15  //ADD YOUR CODE FROM HERE
16
17      carTravel = 375;
18      carHold = 15;
19
20      milesPerGalon = carTravel/carHold;
21
22      cout << "The car's MPG is: " << milesPerGalon << endl;
23
24      return 0;
25
26  }
27
```

```
The car's MPG is: 25
Program ended with exit code: 0
```

#include <iostream>

using namespace std;

int main()

```cpp
{

    double carHold, carTravel, milesPerGalon;

//ADD YOUR CODE FROM HERE


    carTravel = 375;

    carHold = 15;


    milesPerGalon = carTravel/carHold;


    cout << "The car's MPG is: " << milesPerGalon << endl;


    return 0;


}
```

Problem 2. Stock commission

Kathryn bought N shares of stock for $M per share. She must pay her stockbroker a 2 percent commission for the transaction. Write a program that calculates and displays the following:

- The amount paid for the stock alone (without the commission)
- The amount of the commission
- The total amount paid (for the stock plus the commission)

The program will ask the user the values of N and M (remember to use lowercase variable names).

USE THE NEXT TEMPLATE (MANDATORY)

```cpp
//DO NOT MODIFY THIS SECTION
#include <iostream>
using namespace std;
const double BROKER_COMM=2.0;
int main()
{
```

```
    double shares, pricePerShare;
    double amountPaid, amountComm, totalPaid;
//ADD YOUR CODE FROM HERE




}
```

Remember: to read a value from the user, you must use cin like this (add a prompt):

cin >> shares;

```
 1  /* Kathryn bought N shares of stock for $M per share. She must pay her stockbroker a 2 percent commission for the transaction. Write a program that calculates and displays the following:
 2
 3  The amount paid for the stock alone (without the commission)
 4  The amount of the commission
 5  The total amount paid (for the stock plus the commission)
 6
 7  The program will ask the user the values of N and M (remember to use lowercase variable names).*/
 8
 9  // 2 percent = .02
10
11  //DO NOT MODIFY THIS SECTION
12  #include <iostream>
13  using namespace std;
14  const double BROKER_COMM=0.02; // Changed the OG value after asking professor
15  int main()
16  {
17      double shares, pricePerShare;
18      double amountPaid, amountComm, totalPaid;
19  //ADD YOUR CODE FROM HERE
20
21      cout << "Input the cost of the share: $";
22      cin >> pricePerShare;
23
24      cout << "Input the amount of shares to buy: ";
25      cin >> shares;
26
27      amountPaid = shares*pricePerShare;
28      amountComm = amountPaid*BROKER_COMM;
29      totalPaid = amountPaid+amountComm;
30
31      cout << "The amount paid for the stock alone is: $" << amountPaid << endl;
32
33      cout << "The amount of commission paid is: $" << amountComm << endl;
34
35      cout << "The total paid for the transaction is: $" << totalPaid << endl << endl;
36
37      return 0;
38  }

Input the cost of the share: $13
Input the amount of shares to buy: 20
The amount paid for the stock alone is: $260
The amount of commission paid is: $5.2
The total paid for the transaction is: $265.2

Program ended with exit code: 0
```

#include <iostream>

using namespace std;

const double BROKER_COMM=0.02; // Changed the OG value after asking professor

int main()

{

    double shares, pricePerShare;

    double amountPaid, amountComm, totalPaid;

//ADD YOUR CODE FROM HERE

```cpp
    cout << "Input the cost of the share: $";

    cin >> pricePerShare;


    cout << "Input the amount of shares to buy: ";

    cin >> shares;


    amountPaid = shares*pricePerShare;

    amountComm = amountPaid*BROKER_COMM;

    totalPaid = amountPaid+amountComm;


    cout << "The amount paid for the stock alone is: $" << amountPaid << endl;


    cout << "The amount of commission paid is: $" << amountComm << endl;


    cout << "The total paid for the transaction is: $" << totalPaid << endl << endl;


    return 0;
}
```