Objective: Become more familiar with C++ I/O and the C++ development environment you are using for this class.

Description: Write a program that calculates the cost of rising gas prices. Specifically, your final program will read four values (start and end mileage, miles/gallon, and the price of gas).

Solution outline:

1. Display your standard output information using a function named `ShowProgramHeader()`. It contains the statements that print your standard output information. (Recall that the `ShowProgramHeader()` function must be called from your main function.)

2. Prompt user for input (start and end mileage).

3. Get start and final mileage values.

4. Prompt user for input (gas mileage).

5. Get consumption rate (miles/gallon) value.

6. Prompt user for input (gas price).

7. Get gas price ($/gallon) value.

8. Calculate gas consumption (gallons and liters)
   
   Note: 1 gallon = 3.785 liters

9. Calculate total “trip” cost ($)

10. Print all input values and calculated values

Deliverables:

- Program—fully documented (comments, etc.).
- Output:
  
  - Show intermediate steps in the development of your program.
  - Test your final program using two different values for the gas consumption rate (20 MPG and 30 MPG) and the price of gas ($1.80/gal and $3.00/gal). Note: You will need to run your program at least four times.

- Sample calculation sheet: In addition to your program and output, attach a page showing your sample calculations. These sample calculations should be done before you start programming and used as a minimal set of test cases for your program.

If you have any questions regarding this assignment, do not hesitate to contact me. Start working on this assignment as soon as possible, so that you have plenty of time to get help if you need it.