Title

Fuel Economy.

Background Context

To learn how to use assignment statements and arithmetic expressions to make calculations

Program Specifications

With the recently increasing gas prices, car manufacturers have been touting their vehicles' fuel economy. Cars, such as the Toyota Prius tell their drivers what their fuel efficiency for five minute time intervals. In this program, you will perform a calculation similar to what the Prius computer does, to calculate fuel economy (in miles per gallon) for a given duration of time.

Function details:

Function 1: Calculating Fuel Economy

- o   Input the number of minutes the car has traveled will be an integer.
- o   Input the speed of the car will be a positive real number.
- o   Input the gasoline consumed will be a positive real number.
- o   Output the fuel efficiency in miles per gallon to two decimal places

Function 2: Calculating Distance Traveled

- o   The radius of the tires will be a positive real number in inches.
- o   The number of revolutions of the tires will be a positive integer.
- o   Output the number of miles the car has traveled based on the given information, to two decimal places

Function 3: Revised Fuel Economy Calculation

- o   The radius of the car's tires will be a positive real number in inches.
- o   The number of revolutions the car's tires make will be a positive integer.
- o   The amount of gas, in gallons, the car uses will be a positive real number.
- o   Output the fuel efficiency in miles per gallon to two decimal places.

Expectation of User interface:

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1 - Calculating Fuel Economy
2 - Calculating Distance Traveled
3 - Revised Fuel Economy Calculation

Choice feature: 1

How many minutes did you drive?
30
What was the average speed of the car during that time?
40
How many gallons of gas did your car use?
0.8
Your car averaged 25.00 miles per gallon.

Choice feature: 2
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What is the radius of your tires, in inches?
15
How many revolutions did your car's tires make?
10000
Your car traveled 14.87 miles.

Choice feature: 2

What is the radius of your tires, in inches?
16
How many revolutions did your car's tires make?
3151
Your car traveled 5.00 miles.

Choice feature: 3

What is the radius of your tires, in inches?
15
How many revolutions did your car's tires make?
10000
How many gallons of gas did your car use?
0.75
Your car averaged 19.83 miles per gallon.

Choice feature: 3

What is the radius of your tires, in inches?
16
How many revolutions did your car's tires make?
3151
How many gallons of gas did your car use?
0.11
Your car averaged 45.45 miles per gallon.
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