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//FILENAME:          Prob 3-1 v01.cpp
//Author:           M. E. Kabay, PhD, CISSP
//E-mail:          mkabay@compuserve.com
//Assignment:      Lecture 15 demonstration
//Description:     Convert liters used and mileage to miles-per-
gallon
//Last changed:2001-10-17
```

```
#include <iostream>
using namespace std;
```

```
// Function prototype
```

```
double miles_per_gallon(double miles, double gallons);
```

```
// Main routine
```

```
int main()
{
    const double    gallons_per_liter    = 0.264179;
    double          gallons_used         = 0.0,
                   liters_used          = 0.0,
                   miles_traveled       = 0.0;
    char            loop_again          = 'N';

    do
    {
        cout        <<    "How many liters did you use for your
trip? ";
        cin         >>    liters_used;
        cout        <<    endl
                   <<    "How many miles did you travel on your
trip? ";
        cin         >>    miles_traveled;
        cout        <<    endl
                   <<    endl;

        gallons_used = liters_used * gallons_per_liter;

        cout        <<    "Your car achieved "
                   <<    miles_per_gallon(miles_traveled,
gallons_used)
                   <<    " miles per gallon.\n\n"
                   <<    "Would you like to calculate another
fuel-efficiency rating? "
                   <<    endl
                   <<    endl
                   <<    "Enter \"Y\" or \"y\" to continue and any
other character to quit: ";
        cin         >>    loop_again;
    }
    while (loop_again == 'Y' || loop_again == 'y');
```

```
        cout      <<  endl
            <<  endl
            <<  "Thank you and good-bye!"
            <<  endl;

    return 0;

}

// Function definition

double miles_per_gallon(double miles, double gallons)
{
    return (miles / gallons);
}

// End of program file
```