Assignment 5

Due 14 October 7:59am

1 Problem 1

Multiplication Table Write a program, using *for*, which prints out the multiplications table (12×12).

2 Problem 2

Resistors The total resistance of n resistors in parallel is

$$\frac{1}{R} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} + \ldots + \frac{1}{R_n}$$

For example, if we have a network of two resistors with the values 500Ω and 900Ω the equation would yield:

$$\frac{1}{R} = \frac{1}{500} + \frac{1}{900}$$

$$\frac{1}{R} = \frac{7}{2250}$$

$$R = \frac{2250}{7}$$

$$R = 321.4\Omega$$

Write a program to compute the total resistance for any number of parallel resistors.

3 Bonus: 10pts

Minimum Payments Write a program that tells you how long (how manay months) it would take to completely pay off a credit card if you only made the minimum payment. Have the starting balance be input by the user. Assume an APR (Annual Percentage Rate) of 22%. The minimum payment formula is given by

$$(Balance * APR) + (Balance * .01).$$

In other words, it is the sum of your balance times the APR and 1% of the balance. Make sure you take into account that your balance will continue to grow each month due to the APR, however, you may assume that no new purchases are made. Print out the minimum payment made and balance after each month until the balance reaches $0