PROBLEM 1: PAYING THE MINIMUM : 10.0 POINTS

Write a program to calculate the credit card balance after one year if a person only pays the minimum monthly payment required by the credit card company each month.

The following variables contain values as described below:

1. `balance` - the outstanding balance on the credit card
2. `annualInterestRate` - annual interest rate as a decimal
3. `monthlyPaymentRate` - minimum monthly payment rate as a decimal

For each month, calculate statements on the monthly payment and remaining balance, and print to screen something of the format:

```
Month: 1
Minimum monthly payment: 96.0
Remaining balance: 4784.0
```

Be sure to print out no more than two decimal digits of accuracy - so print

```
Remaining balance: 813.41
```

instead of

```
Remaining balance: 813.4141998135
```

Finally, print out the total amount paid that year and the remaining balance at the end of the year in the format:

```
Total paid: 96.0
Remaining balance: 4784.0
```

A summary of the required math is found below:

> **Monthly interest rate**= (Annual interest rate) / 12
> **Minimum monthly payment** = (Minimum monthly payment rate) x (Previous balance)
> **Updated balance each month** = (Previous balance - Minimum monthly payment) x (1 + Monthly interest rate)

Note that the grading script looks for the order in which each value is printed out and the colon separating the description and the number.

The code you paste into the following box should not specify the values for the variables `balance`, `annualInterestRate` or `monthlyPaymentRate` - our test code will define those values before testing your submission

annualInterestRate, or monthlyPaymentRate - our test code will define those values before testing your submission.

```
i=1
MonthlyInterestRate= (annualInterestRate) / 12
PreviousBalance=balance
Total = 0
while i<=12:
    MinimumMonthlyPayment = (monthlyPaymentRate) * (PreviousBalance)
    RBalance = (PreviousBalance - MinimumMonthlyPayment) * (1 + MonthlyInterestRate)
    print 'Month: '+ str(i)
    print 'Minimum monthly payment: ' + str(round(MinimumMonthlyPayment,2))
    print 'Remaining balance: ' + str(round(RBalance,2))
    PreviousBalance = RBalance
    i=i+1
    Total = Total + MinimumMonthlyPayment
print 'Total paid: ' + str(round(Total,2))
print 'Remaining balance: ' + str(round(PreviousBalance,2))
```

Correct

Test results

CORRECT

See full output

Hints
Only two decimal digits of accuracy??
How to think about this problem?
Test Cases to test your code with. Be sure to test these on your own machine - and that you get the same output! - before running your code on this webpage!
The autograder says, "Your submission could not be graded." Help!

Important
Only hit "Check" once per submission. We are unable to give you more than 30 checks.

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