Economics - Finance Charge Problem

You have a $3,000 balance to start the month. Your APR is 18%. Halfway through the month (15 days) you send in a payment of $500, leaving you with a balance of $2,500. Calculate the finance charge using all 3 methods.

Previous Balance Method
Finance charge = Amount owed at beginning of the month x monthly interest rate.
Adjusted Balance Method
Finance charge = Amount owed at end of the month x monthly interest rate (To calculate the amount owed at the end of the month, subtract any payments made from the amount owed at the beginning of the month.)
Average Daily Balance Method
Finance charge = Average daily balance x monthly interest rate (To calculate the average daily balance, add the amounts owed each day and divide by the number of days in the month. Assume a 30 day month.)

Previous Balance Method

1. First, you need to find what the person owed at the start of the month. This is known as your "balance." In this problem, the amount is $3,000.

2. Then you need to figure out the monthly interest rate. I've given you the APR, or annual (yearly) interest rate. To get the monthly interest rate, divide the APR by 12 (12 months!). So 18% divided by 12 months = 1.5%, or .015

3. Now you can plug those into the formula. $3,000 x .015 = **$45.00**

Adjusted Balance Method

1. First, you need to find what the person owed at the end of the month. This is known as your "balance." In this problem, the amount is $2,500.

2. Then you need to figure out the monthly interest rate. I've given you the APR, or annual (yearly) interest rate. To get the monthly interest rate, divide the APR by 12 (12 months!). So 18% divided by 12 months = 1.5%, or .015

3. Now you can plug those into the formula. $2,500 x .015 = **$37.50**

Average Daily Balance Method

1. First, you need to find what the person owed on average for each day. This part is tricky. You take the amount the person owed x the # of days they owed that amount.

   - The first amount owed was $3,000. It was owed for 15 days.
   - $3,000 x 15 days = $45,000

Now move on to the second amount owed.

   - The second amount owed was $2,500. It was owed for 15 days.
   - $2,500 x 15 days = $37,500

Now add the two amounts together.

   - $45,000 + $37,500 = $82,500

Now divide by the total # of days in the month to get the average daily balance.

   - $82,500 divided by 30 = $2,750. This is the average daily balance.

2. Then you need to figure out the monthly interest rate. I've given you the APR, or annual (yearly) interest rate. To get the monthly interest rate, divide the APR by 12 (12 months!). So 18% divided by 12 months = 1.5%, or .015

3. Now you can plug those into the formula. $2,750 x .015 = **$41.25**

Answers are on the next page

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Previous Balance Method: $45.00

Adjusted Balance Method: $37.50

Average Daily Balance Method: $41.25