

Examples 4.4

Example 1

Frank lost his credit card in a local mall. He notified his creditor before the card was used. However, later in the day, someone found the card and charged \$700 worth of hockey equipment on it. How much is Frank responsible for paying?

Example 2 - To change to a monthly interest rate, divide the APR by 12.

Credit card companies issue a monthly statement, therefore APR (annual percentage rate) must be converted to a monthly percentage rate. If the APR is 21.6%, what is the monthly interest rate?

SOLUTION: To change to a monthly interest rate, divide the APR by 12.

The monthly APR is _____

This is the percent that will be used to compute the monthly finance charge.

Example 3 - The average daily balance is an arithmetic average. The arithmetic average is also called the mean. To find this average, you add the balances for the entire billing period, and divide by the number of days.

- ***Finance charges are not charged if, in the previous month, the revolving credit card bill was paid in full. If you pay your card in full every month, you will never pay a finance charge.***

Rebecca did not pay last month's credit card bill in full. Below a list of Rebecca's daily balances for her last billing cycle.

For seven days she owed \$456.11.

For three days she owed \$1,177.60.

For six days she owed \$990.08.

For nine days she owed \$2,115.15.

For five days she owed \$2,309.13.

Find Rebecca's average daily balance.

SOLUTION: Add the number of days in the list to find the number of days in the cycle.

There were _____ days in Rebecca's billing cycle.

To find the sum of the daily balances, multiply the number of days by the amount owed. Then add these products.

	$7(456.11) = 3,192.77$	Divide the total by 30, and round to the nearest cent.
	$3(1,177.60) = 3,532.80$	$43,248.05 \div 30 \approx 1,441.60$
	$6(990.08) = 5,940.48$	The average daily balance is \$1,441.60.
	$9(2,115.15) = 19,036.35$	
	$5(2,309.13) = 11,545.65$	
Total	43,248.05	

Example 4 - Rebecca (from Example 3) pays a finance charge on her average daily balance of \$1,441.60. Her APR is 18%. What is her finance charge for this billing cycle?

SOLUTION: *Finance charges are computed monthly, so the 18% APR must be divided by 12 to get a monthly percentage rate of 1.5%. Take 1.5% of the average daily balance to get the finance charge.*

Change 1.5% to an equivalent decimal, multiply, and round to the nearest cent.

The finance charge is \$_____

Key Terms

- credit card
- impulse buying
- revolving charge account
- charge card
- Truth-in-Lending Act
- Fair Credit Billing Act
- Fair Debt Collection Practices Act
- debit card
- Electronic Funds Transfer Act
- average daily balance
- mean

NAME: _____

Applications 4.4

1. Janine's credit card was stolen, and the thief charged a \$44 meal before she reported it stolen. How much of this is Janine responsible for paying?
2. Dan's credit card was lost on a vacation. He immediately reported it missing. The person who found it days later used it, and charged \$ x worth of merchandise on the card, where $x > \$200$. How much of the \$ x is Dan responsible for paying?
3. Felix and Oscar applied for the same credit card from the same bank. The bank checked both of their FICO scores. Felix had an excellent credit rating, and Oscar had a poor credit rating.
 - a. Felix was given a card with an APR of 12%. What was his monthly percentage rate?
 - b. Oscar was given a card with an APR of 15%. What was his monthly percentage rate?
 - c. If each of them had an average daily balance of \$800 and had to pay a finance charge, how much more would Oscar pay than Felix?
4. Vincent had these daily balances on his credit card for his last billing period. He did not pay the card in full the previous month, so he will have to pay a finance charge. The APR is 19.2%.
 - nine days @ \$778.12
 - eight days @ \$1,876.00
 - four days @ \$2,112.50
 - ten days @ \$1,544.31
 - a. What is the average daily balance?
 - b. What is the finance charge?
5. Suzanne's average daily balance for last month was \$345.23. The finance charge was \$12.54.
 - a. What was the monthly percentage rate?
 - b. What was the APR?

6. Jared's average daily balance for last month was \$560. The finance charge was \$8.12.
- What was the monthly percentage rate?
 - What was the APR?
7. Helene's credit card has an APR of 16.8%. She never pays her balance in full, so she always pays a finance charge. Her next billing cycle starts today. The billing period is 30 days. Today's balance is \$712.04. She is only going to use the credit card this month to make a \$5,000 down payment on a new car.
- If she puts the down payment on the credit card today, what will her daily balance be for each of the 30 days of the cycle?
 - Find her average daily balance for the 30-day period if she puts the down payment on the credit card today.
 - Find the finance charge for this billing period based on the average daily balance from part a
 - Find her average daily balance for the 30-day period if she puts the down payment on the credit card on the last day of the billing cycle.
 - Find the finance charge on the average daily balance from part d.
 - f. How much can Helene save in finance charges if she makes the down payment on the last day, as compared to making it on the first day?
8. Gino has a debit card. The account pays no interest. He keeps track of his purchases and deposits in this debit card register. Find the missing entries a–f.

NUMBER OR CODE	DATE	TRANSACTION DESCRIPTION	PAYMENT AMOUNT	✓	FEE	DEPOSIT AMOUNT	\$ BALANCE
	8/4	Baseball Bat	\$ 92 19				718.19 92.19 a.
	8/5	Gas	51 00				51.00 b.
	8/7	Deposit				400 00	400.00 c.
	8/7	Gas	25 00				25.00 d.
	8/7	Dinner at Spooner's On the Beach	71 12				71.12 e.
	8/11	Books for Fall Semester	491 51				491.51 f.

9. Ron did not pay his credit card bill in full last month. He wants to pay it in full this month. On this month's bill, there is a mistake in the average daily balance. The credit card company lists the average daily balance on his bill as \$510.50. Ron computed it himself and found that it is \$410.50.
- The APR is 18%. What finance charge did the credit card company compute on Ron's bill?
 - If Ron's average daily balance is correct, what should the finance charge be?
10. The terms of Medina's credit card state that the APR is 12.4%, and if a payment is not received by the due date, the APR will increase by $w\%$. The credit card company received Medina's payment three days after the due date in February. Write the interest rate, in decimal form that she will be charged in March, assuming she carried a balance from February.
11. Jill's credit card was stolen. The thief charged a \$900 kayak on the card before she reported it stolen.
- How much of the thief's purchase is Jill responsible for?
 - Jill's average daily balance would have been \$1,240 without the thief's purchase. What was the sum of her daily balances for the 30-day billing period? Explain.
 - The thief's purchase was on her daily balances for 10 out of the 30 days during the billing cycle. What was the sum of Jill's daily balances with the thief's purchase included?
 - What was the average daily balance with the thief's purchase included?
 -
12. Naoko has these daily balances on his credit card for September's billing period. He paid his balance from the August billing in full.
- two days @ \$99.78
 - fifteen days @ \$315.64
 - eleven days @ \$515.64
 - two days @ \$580.32
- His APR is 15.4%. How much is the finance charge on his September bill?
 - Does the credit card company need to calculate his average daily balance? Explain.
 - Naoko calculated his average daily balance to be \$377.85. Is he correct? If not, what was his average daily balance?
 - What mistake did Naoko make when calculating this average daily balance?

