

# Applications

*Life was a lot simpler when what we honored was father and mother rather than all major credit cards.*

Robert Orben, American Comedy Writer

1. Interpret the quote in the context of what you learned.
2. 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?
3. 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?
4. 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 payment?
  - 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?
5. 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?
6. Express the average daily balance algebraically given this set of daily balances.

$x$  days @  $y$  dollars       $w$  days @  $d$  dollars  
 $r$  days @  $q$  dollars       $m$  days @  $p$  dollars
7. Suzanne's average daily balance for last month was  $x$  dollars. The finance charge was  $y$  dollars.
  - a. What was the monthly percentage rate?
  - b. What was the APR?
8. Jared's average daily balance for last month was \$560. The finance charge was \$8.12.
  - a. What was the monthly percentage rate?
  - b. What was the APR?

9. 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.
  - 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?
10. 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		\$ B.
	8/4	Baseball Bat	\$ 92	19					778.19 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.

11. 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?
12. 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.