

## 6-4 CREDIT CARDS: HOW TO PROTECT THEM



**S**ylvia Shawn's mother has several credit cards of her own that she obtained after she and Mr. Shawn were divorced. She was able to get credit in her own name after the divorce even though all of the accounts were in Sylvia's father's name while they were still married. The reason that this was possible is that she was protected by the Equal Credit Opportunity Act.

Sylvia remembers how difficult it was for her father when his credit cards were stolen. He had left them in the glove compartment of his car one day at the golf course. Sylvia was with him at the time. As they left the golf course and stopped to buy gasoline, he realized that all his credit cards had been taken. He spent the next three hours making phone calls to all the banks and charge account offices. The thief had spent over \$10,000 before the information could be entered into the various computer networks! The

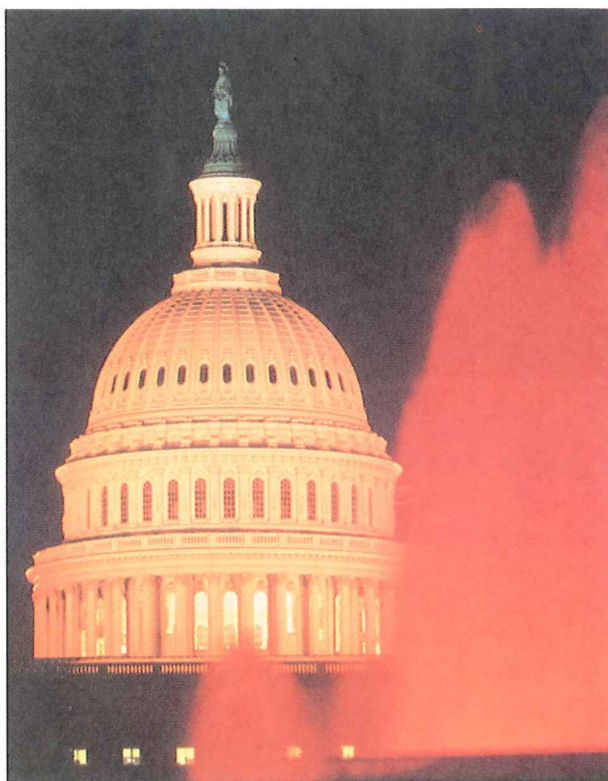
thief charged \$2650 worth of ski equipment, \$3240 worth of video equipment, and a \$4500 computer system to Mr. Shawn's now-closed accounts.

For the next three months, Mr. Shawn dealt with the credit card companies. He discovered that under the Fair Credit Reporting Act and the Fair Credit Billing Act, his credit rating would be preserved and he would have to pay only \$50 of the unauthorized charges on each card. (This was still a substantial amount because he had so many cards.) He also learned what an inconvenience it is to have all your credit accounts changed and to have to wait for new cards to arrive from every creditor.

From her mother's and father's experiences, Sylvia learned that credit cards are just as valuable as cash.

**OBJECTIVES:** In this lesson, we will help Sylvia to:

- Discover how consumers are protected by
  - the Fair Credit Reporting Act.
  - the Fair Credit Billing Act.
  - the Equal Credit Opportunity Act.
- Recognize ways to protect credit cards.
- Calculate credit account interest, payments, and balances.
- Calculate the increase in monthly interest caused by new purchases.



## CONSUMER RIGHTS

The **Fair Credit Reporting Act** forbids credit agencies from giving out incorrect credit information about consumers. An individual who has been denied credit, employment, or insurance because of an inaccurate credit agency report may ask to know the source of the report. The individual can then have both incorrect information and any information that cannot be proven removed from the file. The act also allows consumers to examine information in their credit files. If consumers feel that they have been misrepresented, they can add short statements to the files that give their side of the story.

Under the **Fair Credit Billing Act**, consumers can preserve their credit ratings while settling disputes with stores and credit card companies. During this time a **creditor** cannot report you as delinquent to any credit agency for your failure to pay the portion of your bill that is under dispute.

The **Equal Credit Opportunity Act** prevents discrimination on the basis of sex, marital status, race, color, religion, age, or national origin. For instance, women applying for credit must be judged by the same standards as men. If they have a steady income and can qualify in other respects as good credit risks, they are equally entitled to credit.

The law specifically states that creditors cannot:

- Deny credit on the basis of sex, marital status, race, color, religion, national origin, or age (if an individual is old enough to enter into a binding contract).
- Deny credit because an applicant receives any income from a public program.
- Ask questions concerning birth control practices and plans for children, or assume that a female applicant is likely to become pregnant and have an interruption of income.
- Ask about an applicant's marital status (unless a spouse will be contractually liable for the loan, a spouse's income is counted on to repay a loan, or a spouse plans to use the loan).

- Refuse to consider part-time income of a working spouse, alimony, child support, or Social Security payments.
- Cancel a divorced or widowed person's credit when a marriage ends unless the income has dropped so much that the person may not be able to pay.

This act does not entitle you to credit whenever you want it. You must still pass the creditor's tests that indicate your financial ability and willingness to pay.

## HOW TO PROTECT YOUR CREDIT CARDS

If your credit cards are stolen, the maximum amount of money that you will have to pay is \$50 per card. However, if you carry many cards, like Sylvia's father, you will still have to pay a large sum of money if the thief works quickly before you notice that your cards are gone.

You can take the following precautions to protect yourself:

- Destroy any cards that you do not use. Cut unwanted cards in half and throw them away. Then notify the credit card company to close your account.
- Make a list of all the credit cards that you have (with the account numbers and the name and address of each issuer), and keep this list at home.
- Be sure that you get your card back every time you use it. Dishonest employees of legitimate establishments may retain your card to give to fraudulent users.
- Do not leave your credit cards in the glove compartment of your car. This is one of the first places a credit card thief will look.
- Do not underestimate the value of a credit card. Carrying a credit card is similar to carrying cash. The thief does not underestimate its value!

## ASK YOURSELF

1. How does the Fair Credit Reporting Act protect consumers?
2. How does the Fair Credit Billing Act protect consumers?
3. What does the Equal Credit Opportunity Act prevent?
4. What are three ways in which you can protect your credit cards?

## ALGEBRA REVIEW

**Simplify each expression.  
Round your answer to the  
nearest hundredth.**

1.  $2 + (3 \cdot 4)$

2.  $(2 + 3) \cdot 4$

3.  $2 \cdot (5 + \frac{5}{4})^4$

4.  $2 \cdot 5^4 + \frac{5}{4}$

5.  $18^2[(7 \cdot 8)^3(1 \div 8)]$

6.  $[18^2(7 \cdot 8^3)][1 \div 8]$

7.  $0.22(1200 + 25 - 175)$

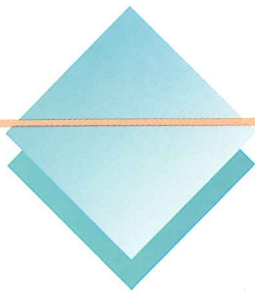
8.  $1.51(6666 - 444 + 22)$

9.  $\frac{(6 + 3 \cdot 4)^5}{(2 + 0.75 \cdot 12)^2}$

10.  $\frac{[(6 + 3) \cdot 4]^5}{[(2 + 0.75) \cdot 12]^2}$

11.  $\frac{25(500) + 450 + 2(450)}{28}$

12.  $\frac{5(980) + 875 + 24(875)}{30}$



## SHARPEN YOUR SKILLS

### SKILL 1

In Lesson 6–3 you learned that the amount of your monthly payment and the monthly rate of interest influence your credit card balance and the amount of interest that you pay each month. Another factor that influences your balance and interest charges is additional purchases that you make before paying for earlier ones.

**EXAMPLE 1** Saul’s mother is trying to restrain herself from making any more purchases with her MasterCard until she pays off her current balance. She is quite successful at making no further purchases during some months, but she is unable to resist making more purchases during others. Saul is worried that her balance may be larger at the end of a 12-month period than it was at the beginning of the period. They have therefore decided to follow the account closely for one year.

**QUESTION** Will she owe more or less at the end of the year if the following hold true?

In month 1 she makes no purchases, and her balance is \$1265.80. The monthly interest rate on the card is 1.5%.

She makes monthly payments of 10% of the amount owed, rounded to the nearest dollar.

Purchases are shown on her statements as follows:

\$250.75 in month 3,

\$75.00 in month 5,

\$380.50 in month 8, and

\$45.90 in month 11.



### SOLUTION

Use a spreadsheet program to work through the first 12 months. Purchases are added to the amount owed from the previous month and payments are subtracted, so

$$\text{Balance} = \text{amount owed} + \text{purchases} - \text{payments}$$

Remember to use the ROUND function for interest in column D and the payment in column F. Interest is rounded to the nearest cent so for cell D2 the formula is

`@ROUND(C2*0.015,2)`

The payment is rounded to the nearest dollar so for cell F2 the formula is

`@ROUND(E2*0.1,0)`

	A	B	C	D	E	F
1	Month	Purchases	Balance	Interest	Amount Owed	Payment
2	1	0.00	1265.80	18.99	1284.79	128.00
3	2	0.00	1156.79	17.35	1174.14	117.00
4	3	250.75	1307.89	19.62	1327.51	133.00
5	4	0.00	1194.51	17.92	1212.43	121.00
6	5	75.00	1166.43	17.50	1183.93	118.00
7	6	0.00	1065.93	15.99	1081.92	108.00
8	7	0.00	973.92	14.61	988.53	99.00
9	8	380.50	1270.03	19.05	1289.08	129.00
10	9	0.00	1160.08	17.40	1177.48	118.00
11	10	0.00	1059.48	15.89	1075.37	108.00
12	11	45.90	1013.27	15.20	1028.47	103.00
13	12	0.00	925.47	13.88	939.35	94.00
14	Total interest			203.40		

+E3-F3+B4

Despite her purchases, Saul's mother reduced her balance from \$1265.80 in month 1 to \$925.47 in month 12. She paid a total of \$203.40 in interest.

## SKILL 2

As you have learned, many bank cards carry an annual fee. If you are late making your scheduled payment, your bank may also charge a late payment penalty.

**EXAMPLE 2** In month 9, Saul's mother had to pay her annual fee of \$50.00. She was also late making her month 11 payment. Therefore, she received a late penalty fee of \$15.00 on her month 12 statement.

**QUESTION** How do these charges affect her month 12 balance and the interest that she pays for the year?

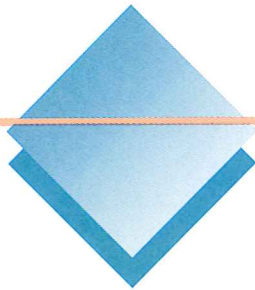
### SOLUTION

Copy the spreadsheet program from Example 1. Insert the annual fee and late penalty payments in the "Purchases" column to recalculate using the new information.



	A	B	C	D	E	F
1	Month	Purchases	Balance	Interest	Amount Owed	Payment
2	1	0.00	1265.80	18.99	1284.79	128.00
3	2	0.00	1156.79	17.35	1174.14	117.00
4	3	250.75	1307.89	19.62	1327.51	133.00
5	4	0.00	1194.51	17.92	1212.43	121.00
6	5	75.00	1166.43	17.50	1183.93	118.00
7	6	0.00	1065.93	15.99	1081.92	108.00
8	7	0.00	973.92	14.61	988.53	99.00
9	8	380.50	1270.03	19.05	1289.08	129.00
10	9	<b>50.00</b>	1210.08	18.15	1228.23	123.00
11	10	0.00	1105.23	16.58	1121.81	112.00
12	11	45.90	1055.71	15.84	1071.55	107.00
13	12	<b>15.00</b>	979.55	14.69	994.24	99.00
14	Total interest			206.29		

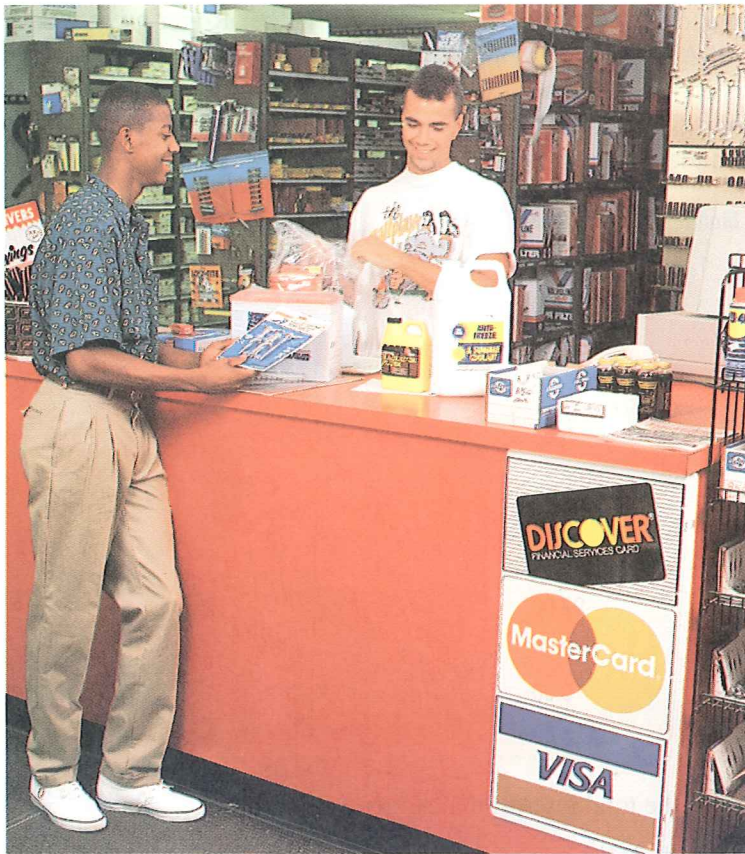
Her month 12 balance is  $979.55 - 925.47 = \$54.08$  larger with the late fee and annual fee. She pays  $206.29 - 203.40 = \$2.89$  more interest.



## TRY YOUR SKILLS

Use a spreadsheet program to determine whether Yolanda owes more or less on her VISA account in month 12 than at the beginning of the year. Find her yearly interest payment. Her monthly interest charge is 1.5%, and she makes monthly payments of 10% of the amount owed, rounded to the nearest dollar.

	Month	Purchases	Balance	Interest	Amount Owed	Payment
1.	1	0.00	\$554.75	\$8.32	\$563.07	
2.	2	\$76.35				
3.	3	0.00				
4.	4	0.00				
5.	5	75.99				
6.	6	22.80				
7.	7	0.00				
8.	8	97.88				
9.	9	75.00				
10.	10	31.00				
11.	11	66.00				
12.	12	67.00				



13. What is the total interest that Yolanda pays?
- 14.–26. Recalculate Exercises 1–13 to reflect late fees of \$10.00 in months 2 and 7 and an annual fee of \$40.00 in month 4.

## EXERCISE YOUR SKILLS

1. Why is it important for people to be able to examine information in their credit files?
2. What might happen if consumers were not protected by the Fair Credit Billing Act?
3. How does the Equal Credit Opportunity Act help a woman who becomes divorced or widowed?

### KEY TERMS

creditor  
Equal Credit  
Opportunity Act  
Fair Credit Billing  
Act  
Fair Credit  
Reporting Act

Use a spreadsheet program to determine whether Roger owes more or less on his VISA account in month 12 than at the beginning of the year. Find the interest that he pays for the year. His account carries a monthly interest charge of 1.5%, and he makes monthly payments of 10% of the amount owed, rounded to the nearest dollar.

	Month	Purchases	Balance	Interest	Amount Owed	Payment
4.	1	0.00	\$875.66	\$13.13	\$888.79	
5.	2	0.00				
6.	3	0.00				
7.	4	0.00				
8.	5	0.00				
9.	6	\$158.80				
10.	7	0.00				
11.	8	85.00				
12.	9	92.00				
13.	10	0.00				
14.	11	0.00				
15.	12	123.00				

16. What is the total interest that Roger pays?

Use a spreadsheet program to determine whether Yory owes more or less on her VISA account in month 12 than at the beginning of the year. Find the interest that she pays for the year. Her account carries a monthly interest charge of 1.5%, and she makes monthly payments of 10% of the amount owed, rounded to the nearest dollar.

	Month	Purchases	Balance	Interest	Amount Owed	Payment
17.	1	0.00	\$1450.63	\$21.76	\$1472.39	
18.	2	0.00				
19.	3	0.00				
20.	4	\$234.00				
21.	5	0.00				
22.	6	0.00				
23.	7	0.00				
24.	8	0.00				
25.	9	0.00				
26.	10	314.00				
27.	11	45.00				
28.	12	68.00				

29. What is the total interest that Yory pays?



- 30.–42. Recalculate Exercises 4–16 to reflect late fees of \$20.00 in months 3 and 9 and an annual fee of \$40.00 in month 8.
- 43.–55. Recalculate Exercises 17–29 to reflect late fees of \$15.00 in months 2, 4 and 9 and an annual fee of \$30.00 in month 10.

### MIXED REVIEW

1. If you earn \$25,900.00 and your FICA withholding is 7.65% of your earnings, how much do you pay for Social Security and Medicare?
2. If you can afford a monthly payment of \$285, how much money can you borrow at 8.75% for 5 years?
3. Determine the monthly payment that must be made to reduce a \$2599.90 VISA balance to zero in 42 months if the card carries an APR of 14.5%.
4. Determine the effective rate of interest on a credit card purchase if the APR is 17.9%.
5. How much money can you save by financing a \$215,000 mortgage at 7.5% over 15 years rather than 30 years?
6. How much money can you save by financing a \$10,500 car at 9% over 3 years rather than 5 years?

A cookie factory makes at least 2000 plain cookies per day and at least 3000 chocolate chip cookies per day. However, the packaging machinery cannot process more than 7500 cookies per day. The profit on each plain cookie is \$0.20 and \$0.25 on each chocolate chip cookie. Let  $x$  and  $y$  represent the number of plain and chocolate chip cookies, respectively, that are produced each day.

7. Write the objective function for the profit on the day's production of cookies.
8. Write the inequalities to express the constraints.
9. Graph the inequalities and use the graph to find the number of plain and chocolate chip cookies that gives the greatest profit.

Matilda wants to have a stereo system that costs \$700. The store offers to let her purchase the set with an installment loan at 12.5% over 2 years. They also offer her a rent-to-own credit plan that allows her to rent the set for a fixed number of months and to apply all of the rent payments to the purchase price. Find the cost of each of the following rental options.

10. \$35 per month for 24 months with no other payment required
11. \$24 per month for 24 months with no other payment required
12. \$30 per month for 24 months with an additional payment of \$50 due at the end of the 24 months
13. Which, if any, of the rental options is a better deal than the installment loan?

## AVERAGE DAILY BALANCE: WHEN SHOULD YOU PAY YOUR BILLS?



**U**rsula likes her job as a sales clerk at Joyful Toys. There is only one part of her job that she does not enjoy doing. Each time a customer presents a credit card for a purchase, Ursula must verify that the customer's bank will approve the charge. Sometimes the credit is denied. Ursula does not like to inform a customer of this fact.

One time a customer became angry with Ursula when she told him that his credit was denied. He acted as though she was at fault. He yelled at her and demanded to see the store manager. As he left, he hurled a handful of action figures and a model rocket toward the display case, knocking over a tower of blocks and almost breaking the glass. The store manager did not blame Ursula for the mess or for the fact that several customers left while all this was happening. Nevertheless the incident made her feel very uncomfortable.

The bank that issues a customer's credit card may refuse to pay Joyful Toys if Ursula or another clerk neglects to verify the customer's credit. If that happens, Joyful Toys will lose the entire cost of the items that are purchased. The store already pays a service fee to the bank each time a purchase with a bank card is made.

When Ursula handles a customer's credit card, she must be careful to process the information correctly. After verifying the charge with the customer's bank, she makes an imprint of the card on the sales slip. She circles the expiration date on the sales slip. Ursula then asks the customer to sign the sales slip and compares the customer's signature on the sales slip with the signature on the card. She can then be satisfied that she has done everything possible to verify the customer's right to use the card.