

# B.5 Credit Cards

## Essential Question How do credit cards work?

### 1 ACTIVITY: Running a Business

Work with a partner. You own a shop that sells greeting cards. A customer uses a credit card to pay the total shown on the receipt.

- a. How much will the credit card company deposit in your bank account?
- b. Of the amount in part (a), how much do you have to send to the state and county?



Polly Greetings  
123 Main Street  
Anywhere, USA  
(905) 555-1212

Credit Card Sale

Card #8765432187654321  
Date: 05/26/2012 10:16 AM

Auth. \$025873

SALE:	\$34.95
STATE TAX:	\$ 2.10
COUNTY TAX:	\$ 0.55
TOTAL:	\$37.60

x Maria Lopez

-- THANK YOU --

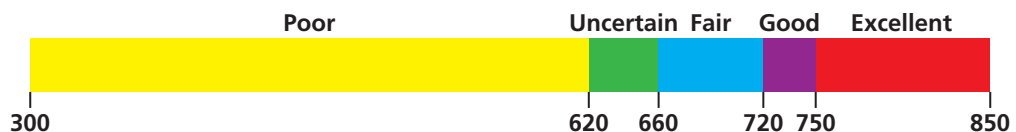
Send the state this amount for sales tax

Send the county this amount for sales tax

The credit card company keeps 6% of the total

### 2 ACTIVITY: Credit Rating

**RESEARCH PROJECT** Your credit score is a number from 300 to 850 that rates your credit history. Write a report on the types of things that increase your credit score and also the types of things that decrease it.



### 3 ACTIVITY: Credit Card Bills

Work with a partner. Maria paid \$140.00 of her previous month's credit card balance of \$490.00. Her credit card company charged her interest on the average daily balance for the current month.

The average daily balance for the first week is

$$\frac{490.00 + 490.00 + 490.00 + 350.00 + 350.00 + 350.00 + 350.00}{7} = 410.00.$$

- a. Copy and complete the table for the entire month of May to find the average daily balance for the month.

Date	Activity Since Last Statement	Amount	Balance
05/01/2012			490.00
05/02/2012			490.00
05/03/2012			490.00
05/04/2012	Payment	-140.00	350.00
05/05/2012			350.00
⋮	⋮	⋮	⋮
05/25/2012			350.00
05/26/2012	Polly Greetings	37.60	
05/27/2012			
05/28/2012			
05/29/2012			
05/30/2012			
05/31/2012			

- b. Maria's credit card company charges her \$5.56 interest on her average daily balance for the month. What is her monthly interest rate?
- c. Find the average daily balance for the month without the purchase at Polly Greetings. Use the interest rate you found in part (b) to calculate the interest charge.
- d. What does the difference between the interest charges in parts (b) and (c) represent?

## What Is Your Answer?

4. **IN YOUR OWN WORDS** How do credit cards work?

### Practice

Use what you learned about credit cards to complete Exercises 3–5 on page A40.

## Key Vocabulary

credit card, p. A38

A **credit card** is used to postpone payment on a purchase. To allow this, the credit card company keeps a percentage of the total and sends the remaining amount to the seller. The seller pays the taxes due on the purchase.

### EXAMPLE 1 Analyzing a Credit Card Transaction



Louis uses his credit card to buy CDs and guitar strings at a music store. The credit card company keeps 6% of the total.

- a. How much money does the credit card company keep from the transaction?

The credit card company keeps 6% of the total.  
Find 6% of \$37.48.

$$6\% \text{ of } \$37.48 = 0.06 \cdot 37.48 \\ \approx 2.25$$

- The credit card company keeps \$2.25.

- b. How much money does the music store receive from the credit card company?

The music store receives the remaining amount.

- So, the music store receives  $\$37.48 - \$2.25 = \$35.23$ .

- c. How much money does the music store keep from the transaction?

The music store sends the state sales tax to the state.

- So, the music store keeps  $\$35.23 - \$2.45 = \$32.78$ .

Caja de Música	
Louis A. Cardholder	
Credit card # xxxx xxxx xxxx 8080	
5:19 P.M. 08/10/12	
ITEM	AMOUNT
2 CDs	22.98
Pkg Guitar Strings	12.05
-----	
<b>SUBTOTAL</b>	35.03
7% State Tax	2.45
<b>TOTAL</b>	<b>37.48</b>
-THANK YOU- *Customer Copy*	

### On Your Own

- WHAT IF?** In Example 1, Louis charges \$90.00, including sales tax, to his credit card. How much money does the music store receive from the credit card company?

Now You're Ready  
Exercises 6–9



Credit card owners are sent a monthly bill. The new balance shown on the bill may consist of unpaid balances, new purchases, interest, or other fees.

Many credit card companies charge interest based on the average daily balance on the account during a statement period. The interest charge is the product of the monthly interest rate and the average daily balance.

## EXAMPLE 2 Paying a Credit Card Bill

Louis receives a credit card bill in the mail. His monthly interest rate is 1.5%. Find the interest charge and the new balance.

### Credit Card Statement

Account Number XXXX XXXX XXXX 8080

Date	Activity Since Last Statement	Amount
08/10/12	Online Payment	-600.00
	---- Purchases ----	
08/02/12	Gas Station	59.61
08/06/12	Cell Phone Company	58.86
08/07/12	Restaurant	28.65
08/10/12	Caja de Música	37.48
08/15/12	Electric Bill	50.47
08/20/12	Car Repair Shop	164.93

Average Daily Balance \$522.47

Statement Closing Date 09/01/12

Previous Balance \$700.00

Payments -600.00

Unpaid Balance \$100.00

New Purchases \$400.00

Interest Charge

New Balance

Find the product of the monthly interest rate and the average daily balance.

$$0.015 \cdot 522.47 \approx \$7.84$$

The previous balance was not fully paid. So, the new balance is the sum of the unpaid balance, the new purchases, and the interest charge.

$$\$100.00 + \$400.00 + \$7.84 = \$507.84$$

∴ So, the interest charge is \$7.84 and the new balance is \$507.84.

### On Your Own

Now You're Ready  
Exercise 10

- WHAT IF?** In Example 2, if Louis had paid only \$50.00 on last month's bill, the average daily balance would be \$912.79. Find the interest charge and the new balance.

## Vocabulary and Concept Check

- VOCABULARY** How is a credit card similar to a debit card? How is a credit card similar to a loan? Explain.
- REASONING** Why is it important to know the annual interest rate of a credit card?

## Practice and Problem Solving

You own a bookstore. A customer uses a credit card to pay the total shown on the receipt.

- How much money is sent to the state?
- How much money is sent to the county?
- The credit card company keeps 5% of the total. How much money does the credit card company keep?

SALE:	\$45.00
STATE TAX:	\$ 2.70
COUNTY TAX:	\$ 0.72
TOTAL:	\$48.42

In Exercises 6–9, a credit card company keeps the given percent of the total. Find the amount of money (a) the credit card company keeps from the transaction, (b) the store receives from the credit card company, and (c) the store keeps from the transaction.

1 6. 4%

**Office Supply Store**

Maria Lopez  
Credit card # xxxx xxxx xxxx 4321  
11:24 A.M. 05/13/11

SALE:	\$62.00
SALES TAX:	\$ 4.03
<b>TOTAL:</b>	<b>\$66.03</b>

-THANK YOU-

7. 3%

**ROY'S HARDWARE Store**

Michael Jones  
Credit card # xxxx xxxx xxxx 7914  
9:45 A.M. 06/02/12

SALE:	\$105.80
SALES TAX:	\$ 5.29
<b>TOTAL:</b>	<b>\$111.09</b>

THANK YOU

8. 3.5%

**Pretzel Shop**

Gustav Tanner  
Credit card # xxxx xxxx xxxx 5059  
1:24 P.M. 08/24/11

SALE:	\$8.25
SALES TAX:	\$0.50
<b>TOTAL:</b>	<b>\$8.75</b>

\*\*\*THANK YOU\*\*\*

9. 5%

**Arts and Crafts Outlet**

Gloria Moore  
Credit card # xxxx xxxx xxxx 6338  
3:12 P.M. 11/30/12

SALE:	\$75.00
SALES TAX:	\$ 3.75
<b>TOTAL:</b>	<b>\$78.75</b>

-THANK YOU-

- 2 10. A credit card bill arrives in the mail. The monthly interest rate is 1.25%. Find the interest charge and the new balance.

Credit Card Statement		
Account Number XXXX XXXX XXXX 0947		Average Daily Balance \$552.93
Date	Activity Since Last Statement	Amount
02/15/11	Payment	250.00
	---- Purchases ----	
02/03/11	Town Mall	75.08
02/07/11	Grocery Store	92.65
02/13/11	Costume Shop	18.33
02/20/11	Camping Store	48.50
02/25/11	Shoe Outlet	65.44
		Statement Closing Date 03/01/11
		Previous Balance \$500.00
		Payments -250.00
		Unpaid Balance \$250.00
		New Purchases \$300.00
		Interest Charge <span style="background-color: yellow;">        </span>
		New Balance <span style="background-color: yellow;">        </span>



11. **CLOTHING** You use a credit card to buy \$100 worth of merchandise at a clothing store. The sales tax is 6%. The credit card company keeps 2% of the total.
- How much money does the store keep from the transaction?
  - About what percent of the transaction does the store keep?
  - The clothing store decides to charge a 2% fee for using a credit card. The fee is added to the purchase price before taxes are calculated. Does the store keep \$100 from the sale now? Explain.

12. **LAYAWAY** Layaway is a payment method used to purchase an item without paying the entire cost at one time. A customer pays a deposit to put an item “on layaway” for a given period of time. The store reserves the item until it is paid for in full. What is an advantage of putting an item “on layaway” compared to using a credit card?

13. **Number Sense** The statement closing date on your credit card is the first of each month. Your new balance on January 1 is \$800. You stop making purchases with the card and pay the minimum payment of \$20 on the first of each month, starting January 1. The monthly interest rate is 2%. What is the balance one year later? How much have you paid after one year? How much did the amount due decrease? Explain why you should pay more than the minimum payment.



### Fair Game Review what you learned in previous grades & lessons

Simplify the expression. (Section 6.4)

14.  $6\sqrt{3} - 2\sqrt{3}$

15.  $\sqrt{8} \cdot \sqrt{18}$

16.  $\sqrt{\frac{10}{49}}$

17.  $5\sqrt{19} + \sqrt{19}$

18. **MULTIPLE CHOICE** What is  $\frac{30}{800}$  as a percent? (Skills Review Handbook)

(A) 0.0375%

(B) 0.375%

(C) 3.75%

(D) 37.5%