

B.6 Payroll Deductions

Essential Question How can you read a payroll earnings statement?

1 ACTIVITY: Reading a Payroll Earnings Statement

Work with a partner. Talk about each entry on the payroll statement. Do you understand each entry?

- How much does John get paid per hour?
- How often does John get paid?
- How many paychecks has John received so far in 2012?
- How is the gross pay related to the net pay?
- How much does John pay for:
 - federal income tax?
 - Social Security tax?
 - Medicare tax?



NAME John Doe			PAY ENDING	PAY DATE	DEPARTMENT	NET PAY	
EARNINGS STATEMENT			05/18/12	05/18/12	312	983.87	
HOURS	RATE	AMOUNT	PAYROLL TAX WITHHELD				
80	17.50	1400.00	FEDERAL 192.85	SOC. SEC. 83.70	HEALTH INS. 50.00	MEDICARE 19.58	401K 70.00
YTD GROSS PAY		GROSS PAY	YEAR TO DATE				
14,000.00	1400.00	1400.00	FEDERAL 1928.50	SOC. SEC. 837.00	HEALTH INS. 500.00	MEDICARE 195.80	401K 700.00
PAYROLL CHECK			EMPLOYEE ID NO. 876 54 3210				
			DEPT. 312	CHECK NO. 12789	PAY DATE 05/18/12		
PAY EXACTLY	***Nine Hundred Eighty Three and 87/100***					DOLLARS	
PAY TO THE ORDER OF	John Doe Street Address Your City, USA			BANK NAME CITY, STATE, ZIP CODE		AMOUNT ***983.87	
						<i>Susan Florencia</i>	

2 ACTIVITY: Federal Income Tax Rates

Work with a partner. Use the table to find the federal income tax for 2008 for the given taxable income.

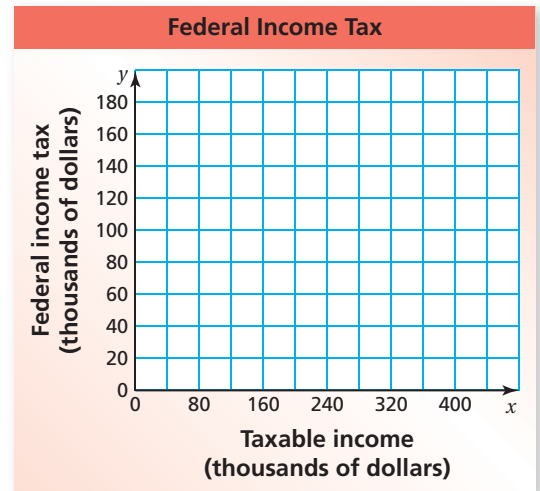
- a. \$7982.00 b. \$26,500.00 c. \$54,780.00
 d. \$125,348.40 e. \$235,893.70 f. \$356,789.00

Filing Status: Single		
If taxable income is between. . .	Tax bracket is:	Federal income tax is:
\$0 and \$8,024	10%	10% of the income over \$0
\$8,025 and \$32,549	15%	\$802.50 plus 15% of the income over \$8,025
\$32,550 and \$78,849	25%	\$4,481.25 plus 25% of the income over \$32,550
\$78,850 and \$164,549	28%	\$16,056.25 plus 28% of the income over \$78,850
\$164,550 and \$357,699	33%	\$40,052.25 plus 33% of the income over \$164,550
\$357,700 and Above	35%	\$103,791.75 plus 35% of the income over \$357,700

3 ACTIVITY: Federal Income Tax Rates

Work with a partner.

- Make a scatter plot of the data in Activity 2.
- Federal income tax is called a *graduated tax*. What does this mean?
- Graduated income tax graphs are not linear. Does the graph show a linear pattern?



What Is Your Answer?

4. **IN YOUR OWN WORDS** How can you read a payroll earnings statement?

Practice

Use what you learned about payroll deductions to complete Exercises 3–5 on page A46.

Key Vocabulary

gross pay, p. A44
net pay, p. A44
payroll statement,
p. A44

Study Tip

Other deductions, such as health insurance, may appear on a payroll statement.

The amount of money earned by an employee during a pay period is called **gross pay**. Several deductions are made from an employee's gross pay. Here are some of the deductions that are required by U.S. law.

- **Federal income tax** A tax based on an employee's earned income that is paid directly to the U.S. federal government.
- **Social Security tax** A tax used to fund the Social Security system, which provides benefits mainly for retired workers.
- **Medicare tax** A tax used to fund Medicare, which is a medical plan administered by the federal government mainly for people age 65 and older.

The amount of money that an employee receives after all the deductions have been made is called **net pay**. A **payroll statement** shows the gross pay, the deductions, and the net pay.

EXAMPLE 1 Reading a Payroll Statement

According to the payroll statement, how often does Cara get paid?

NAME Cara Jimenez			PAY ENDING	PAY DATE	DEPARTMENT	NET PAY
EARNINGS STATEMENT			06/30/12	06/30/12	M	1845.39
HOURS	RATE	AMOUNT	PAYROLL TAX WITHHELD			
168	14.50	2436.00	FEDERAL 170.94	SOC. SEC. 143.55	HEALTH INS. 120.75	MEDICARE 33.57
YTD GROSS PAY 14,616.00			YEAR TO DATE			
GROSS PAY 2436.00			FEDERAL 1025.64	SOC. SEC. 861.30	HEALTH INS. 724.50	MEDICARE 201.42
			401K 730.80			
PAYROLL CHECK			EMPLOYEE ID NO. 987 4320			
			DEPT. M	CHECK NO. 10259	PAY DATE 06/30/12	
PAY EXACTLY			***ONE THOUSAND EIGHT HUNDRED FORTY FIVE and 39/100***			
PAY TO THE ORDER OF			BANK NAME CITY, STATE, ZIP CODE			
Cara Jimenez 314 Pi Circle Mathville, FL 31416			AMOUNT ***1845.39			
			Matthew Pascal			

The paycheck is for 168 hours and is dated for the end of June.

∴ So, you can conclude that Cara is paid once per month.

On Your Own

1. What is Cara's hourly wage?
2. What is the difference between Cara's gross pay and net pay?
3. How much does Cara pay annually for health insurance?

Now You're Ready
Exercises 6–11

A 401(k) plan is an optional retirement savings plan offered by some companies to their employees. The amount an employee can contribute toward a 401(k) plan is limited by U.S. law. The amount of money in a 401(k) is not taxed until it is withdrawn.

EXAMPLE 2 Analyzing a Payroll Statement

DEDUCTION	NET PAY
	1845.39
EDICARE	33.57
401K	121.80
EDICARE	201.42
401K	730.80

In Example 1, what percent of Cara's gross pay is put in her 401(k)?

Divide the amount put in her 401(k) by her gross pay.

$$\frac{\text{amount put in 401(k)}}{\text{gross pay}} = \frac{121.80}{2436.00} = 0.05 = 5\%$$

••• 5% of her gross pay is put in her 401(k).

Social Security and Medicare taxes are calculated after the health insurance amount is subtracted from the gross pay. Federal income taxes are calculated after the health insurance amount *and* the 401(k) contribution are subtracted from the gross pay.

EXAMPLE 3 Finding Tax Percents

a. What percent does Cara pay for Social Security tax?

PAYROLL TAX		
TOTAL	SOC. SEC.	HEALTH
143.55	143.55	120.75
YEAR TO DATE		
TOTAL	SOC. SEC.	HEALTH
861.30	861.30	724.50

Divide the amount of Social Security tax by the difference of her gross pay and health insurance amount.

$$\frac{\text{Social Security tax}}{\text{gross pay} - \text{health insurance}} = \frac{143.55}{2436.00 - 120.75} = \frac{143.55}{2315.25} \approx 0.062 = 6.2\%$$

••• Cara pays 6.2% for Social Security tax.

b. What percent does Cara pay for federal income tax?

PAYROLL TAX	
FEDERAL	SOC. SEC.
170.94	143.55
YEAR TO DATE	
FEDERAL	SOC. SEC.
1025.64	861.30

Divide the amount of federal income tax by the difference of her gross pay and the sum of the health insurance amount and 401(k) contribution.

$$\frac{\text{federal income tax}}{\text{gross pay} - [\text{health insurance} + 401(k)]} = \frac{170.94}{2436.00 - 242.55} \approx 0.078 = 7.8\%$$

••• Cara pays 7.8% for federal income tax.

On Your Own

Now You're Ready
Exercises 13–15

- Cara changes her 401(k) contribution to 8% of her gross pay. How much will Cara put in her 401(k) each month?
- What percent does Cara pay for Medicare tax?

Vocabulary and Concept Check

- REASONING** Is the net pay *sometimes*, *always*, or *never* greater than the gross pay? Explain.
- REASONING** Why do you think the amount of money an employee can contribute toward a 401(k) plan is limited by U.S. law?

Practice and Problem Solving

In Exercises 3–5, use the table in Activity 2 to find the federal income tax for a person who had the given amount of taxable income.

- \$10,500.00
- \$58,435.00
- \$6120.75

In Exercises 6–12, use the payroll statement.

NAME Al Smith			PAY ENDING	PAY DATE	DEPARTMENT	NET PAY	
EARNINGS STATEMENT			04/20/12	04/20/12	216	671.85	
HOURS	RATE	AMOUNT	PAYROLL TAX WITHHELD				
72	12.50	900.00	FEDERAL 97.62	SOC. SEC. 53.11	HEALTH INS. 43.40	MEDICARE 12.42	401K 21.60
YTD GROSS PAY		GROSS PAY	YEAR TO DATE				
7200.00		900.00	FEDERAL 780.96	SOC. SEC. 424.88	HEALTH INS. 347.20	MEDICARE 99.36	401K 172.80
PAY EXACTLY			EMPLOYEE ID NO.		812 84 9628		
SIX HUNDRED SEVENTY ONE AND 85/100			PAYROLL CHECK		DEPT. CHECK NO. PAY DATE		
PAY TO THE ORDER OF			BANK NAME		AMOUNT		
Al Smith 983 Any Street My Town, USA			CITY, STATE, ZIP CODE		***671.85		
<i>Louisa Fermat</i>							

6. What is Al's hourly wage?
7. How often does Al get paid?
8. What is Al's gross pay for April?
9. What is Al's annual net pay?
10. How many paychecks has Al received so far in 2012?
11. What is the difference between Al's gross pay and net pay?
- ERROR ANALYSIS** Describe and correct the error in finding Al's annual gross pay.



Gross Pay: \$900.00
 $\$900.00 \cdot 12 = \$10,800$
 His annual gross pay is \$10,800.

In Exercises 13–15, use the payroll statement on page A46.

- 2 3 13. What percent does Al pay for Social Security tax?
 14. What percent does Al pay for Medicare tax?
 15. What percent does Al pay for federal income tax?
 16. **PROJECT** The table shows the federal income tax brackets for 2008.

Filing Status: Head of Household		
If taxable income is between. . .	Tax bracket is:	Federal income tax is:
\$0 and \$11,449	10%	10% of the income over \$0
\$11,450 and \$43,649	15%	\$1,145 plus 15% of the income over \$11,450
\$43,650 and \$112,649	25%	\$5,975 plus 25% of the income over \$43,650
\$112,650 and \$182,399	28%	\$23,225 plus 28% of the income over \$112,650
\$182,400 and \$357,699	33%	\$42,755 plus 33% of the income over \$182,400
\$357,700 and Above	35%	\$100,604 plus 35% of the income over \$357,700

- a. Use the Internet to research the federal income tax brackets for the current year. Make a table similar to the one above.
 b. Describe the change in the federal income tax from 2008 to the current year for each tax bracket.
 c. Compare the federal income tax for 2008 and the federal income tax for the current year for a person whose taxable income was \$30,000.
17. **STATE TAXES** In addition to federal income tax, you may have to pay state income tax. Use the Internet to research the income taxes for Colorado, Florida, and Massachusetts. Which state has the lowest income tax? the highest income tax?
18. **Critical Thinking** Your annual gross pay is \$32,400. Five percent of your gross pay is put in your 401(k) and 7% pays for health insurance. You pay 15% for federal income tax. What amount of federal income tax do you pay?



Fair Game Review what you learned in previous grades & lessons

Evaluate the expression.

19. $3^{-1} \cdot 3^2$ 20. $5^0 \cdot 5^3$ 21. $\frac{7^2 \cdot 7^{-4}}{7^{-5}}$ 22. $\frac{6^{-1} \cdot 6^2}{6^3}$

23. **MULTIPLE CHOICE** Which inequality represents “20 is less than a number x ”?

\checkmark

(A) $x < 20$

(B) $20 \geq x$

(C) $20 \leq x$

(D) $20 < x$