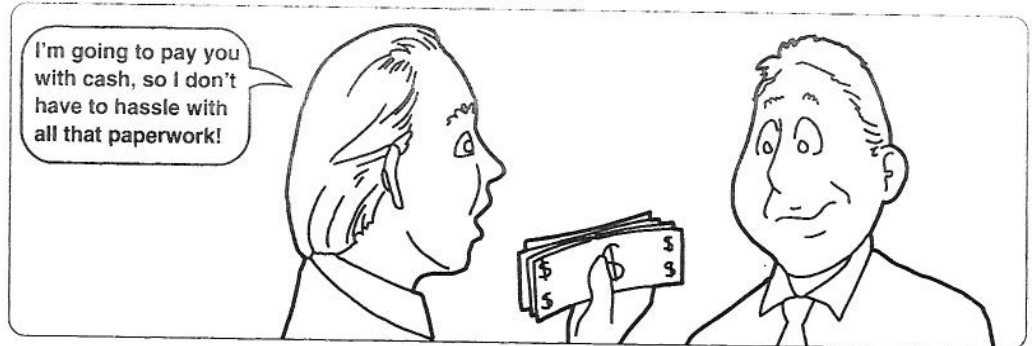


# Payroll



## CHAPTER OBJECTIVES

When you complete this chapter successfully, you will be able to:

1. Calculate salary and hourly wages.
2. Use salary, hourly wages, piecework, differential piecework, straight commission, sliding scale commission, and salary plus commission to calculate payroll.
3. Determine employees' federal income tax and FICA withholding.

- Tom earns \$6.57 per hour painting fences. What is his gross pay for a week in which he worked  $38\frac{1}{4}$  hours?
- Eleanora earns a 5% commission on her weekly sales of dance equipment. What was her commission for a week in which she sold \$5958.76 in merchandise?

**W**hen you hear people talk about the resources that go into producing something, you probably think about raw materials like wire and wood, plastic, and peanuts. But no business can operate without another type of resource: people. Just as businesses must pay for the other resources they use, so they must pay for the human resources they use. (It's a sad fact of business life that unpaid employees seldom stick around.)

In this chapter, you will learn about a variety of ways employers have developed for paying their workers. A little concentration, you'll find, will really pay off here.



**Can You:**

- Compute the salary per pay period?
- Calculate the regular wages of hourly employees?
- Compute overtime pay?
- ... If not, you need this section.

**Computing Salary**

**Salary** Payment to individuals for their labor based on a fixed amount regardless of the hours worked.

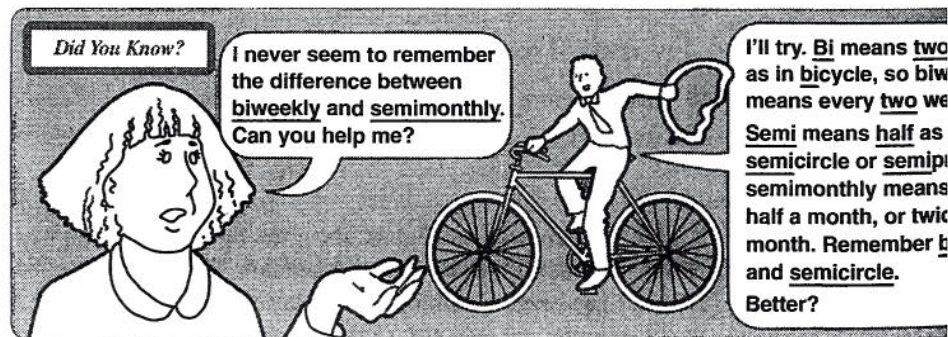
The most common method of paying white-collar and management personnel is by **Salary** is a fixed amount of money paid to an employee for certain assigned duties. The number of hours worked or the productivity of the employee does not affect the salary. In course, they *do* affect the salaried employees' chances of keeping their jobs, being promoted and getting raises. (Paying an employee with a combination of salary and commission is covered in Section 6.2 of this chapter.)

Salaries are often stated as an amount per year. Few people are paid only once a year, however. Most annual salaries are converted to more frequent pay periods. *Common pay periods*

Weekly	52 times per year
Biweekly	Every other week—26 times per year
Semimonthly	Twice a month—24 times per year
Monthly	12 times per year

For example, if Keith's annual salary is \$22,365 per year, what is his monthly salary? Keith's monthly salary, simply divide the annual salary by the number of months in a year.

$$\frac{\$22,365}{12} = \$1863.75$$



**YOUR TURN**

**WORK THIS PROBLEM**

**The Question:**

Judy's annual salary is \$24,960. Compute her salary payments if she is paid

- (a) weekly
- (b) biweekly
- (c) semimonthly
- (d) monthly

## ✓ YOUR WORK

*The Solution:*

(a) Weekly:  $\frac{\$24,960}{52} = \$480$

(b) Biweekly:  $\frac{\$24,960}{26} = \$960$

(c) Semimonthly:  $\frac{\$24,960}{24} = \$1040$

(d) Monthly:  $\frac{\$24,960}{12} = \$2080$

**Calculating Hourly Pay**

**Hourly Wages** Payment to individuals for their labor based on a rate per hour worked.

**Gross Pay** Pay before taxes.

The most common method of paying wages is based on the number of hours worked. Straight **hourly wages** are very easy to calculate. The **gross pay** is the number of hours worked times the pay rate per hour.

$$\text{Gross pay} = \text{hours worked} \times \text{rate per hour}$$

For example, if Patti worked 38 hours last week and her pay rate is \$6.78 per hour, what is her gross pay?

$$\begin{array}{cc} \text{Hours} & \text{Hourly rate} \\ \downarrow & \downarrow \\ \text{Gross pay} = 38 \times \$6.78 = \$257.64 \end{array}$$

**YOUR TURN**

## WORK THIS PROBLEM

*The Question:*

Tom earns \$6.57 per hour painting fences. What is his gross pay for a week in which he worked  $38\frac{1}{4}$  hours?

## ✓ YOUR WORK

*The Solution:*

$$38\frac{1}{4} \times \$6.57 = 38.25 \times \$6.57 = \$251.3025 = \$251.30 \text{ rounded}$$

The easiest way to work this problem is to first change  $38\frac{1}{4}$  to a decimal form,  $38\frac{1}{4} = 38.25$ , then multiply. If you need a review of changing fractions to decimal numbers, see Section 3.3.

Most businesses use a payroll sheet to compute gross pay. The payroll sheet for straight hourly wages will include the employee's name, Social Security number, number of hours worked per day, total hours for the week, rate per hour, gross pay, and total gross pay.

The following is a sample payroll sheet. We can complete this payroll sheet by calculating each employee's total hours per week, multiplying it by that worker's hourly wage to find the gross pay for each employee, and then totaling the gross pay column vertically.

← multiply →

Name	Hours					Total	Rate	Gross
	M	T	W	T	F	Hours	per Hour	Pay
Eyre, Jane	6	8	5	8	8	35	6.50	227.50
Marnier, Silas	8	8	8	8	8	40	5.25	210.00
Sawyer, Thomas	7	7	6	7	7	34	6.84	232.56
Total								670.06


**YOUR  
TURN**
**WORK THIS PROBLEM**
**The Question:**

Complete the following payroll sheet.

Name	Hours					Total	Rate	Gross
	M	T	W	T	F	Hours	per Hour	Pay
Bovary, Emma	7	8	6	7	8		6.00	
Thorpe, Jim	8	8	8	8	7		6.29	
Bingo, Bob	8	8	8	8	8		7.58	
Friday, Joe	8	6	8	8	7		7.18	
Watson, John	6	8	7	7	8		5.94	
Total								

**✓ YOUR WORK**
**The Solution:**

Name	Hours					Total	Rate	Gross
	M	T	W	T	F	Hours	per Hour	Pay
Bovary, Emma	7	8	6	7	8	36	6.00	216.00
Thorpe, Jim	8	8	8	8	7	39	6.29	245.31
Bingo, Bob	8	8	8	8	8	40	7.58	303.20
Friday, Joe	8	6	8	8	7	37	7.18	265.66
Watson, John	6	8	7	7	8	36	5.94	213.84
Total								1244.01

## Paying Overtime

By law, nonexempt employees must be paid at a higher rate per hour for overtime. Exempt employees are not covered, and salaried employees are compensated on a different basis. For

**Overtime** In the United States, overtime is usually any time in excess of 40 hours worked; individuals paid hourly wages must receive  $1\frac{1}{2}$  times the regular rate for all these hours.

most hourly employees, overtime is the time worked in excess of 40 hours per week. The usual overtime rate is:

$$\text{Overtime rate} = 1\frac{1}{2} \times \text{regular rate}$$

For example, if the regular rate is \$8.58, the overtime rate would be:

$$1\frac{1}{2} \times \$8.58 = 1.5 \times \$8.58 = \$12.87$$

Note that you need to write  $1\frac{1}{2}$  as 1.5 before you multiply.

For employees working over 40 hours per week, four steps are necessary to compute their gross pay.



### Steps: Calculating Hourly Pay with Overtime

**STEP 1.** Compute the regular pay. (Note that the regular hours cannot exceed 40 for a week.)

$$\text{Regular pay} = \text{regular hours} \times \text{regular rate per hour}$$

**STEP 2.** Compute the overtime rate.

$$\text{Overtime rate} = 1\frac{1}{2} \times \text{regular rate}$$

**STEP 3.** Compute the overtime pay.

$$\text{Overtime pay} = \text{overtime hours} \times \text{overtime rate}$$

**STEP 4.** Compute the total wages or gross pay.

$$\text{Total wages} = \text{regular pay} + \text{overtime pay}$$

It's really quite easy. For example, Pauline earns \$5.86 per hour. Last week she worked 46 hours. What were her regular pay, overtime rate, overtime pay, and total wages?

**Step 1.** Regular pay =  $40 \times \$5.86 = \$234.40$

**Step 2.** Overtime rate =  $1\frac{1}{2} \times \$5.86 = 1.5 \times \$5.86 = \$8.79$

**Step 3.** Overtime pay =  $6 \times \$8.79 = \$52.74$

**Step 4.** Total wages =  $\$234.40 + 52.74 = \$287.14$



**YOUR TURN**

#### WORK THIS PROBLEM

**The Question:**

Dave worked 45 hours last week. His regular pay rate is \$9.88 per hour. What is his total wage?

#### ✓ YOUR WORK

**The Solution:**

$$\text{Regular pay} = 40 \times \$9.88 = \$395.20$$

$$\text{Overtime rate} = 1\frac{1}{2} \times \$9.88 = \$14.82$$

$$\text{Overtime rate} = 5 \times \$14.82 = \$74.10$$

$$\text{Total wage} = \$395.20 + 74.10 = \$469.30$$

Gross Pay

27.50

0.00

32.56

70.06

Gross Pay

Gross Pay

216.00

245.31

303.20

265.66

213.84

1244.01

e. Exempt basis. For



When computing the overtime rate, you can end up with more than two decimal places. Carry all the decimal places and round only after you have computed the overtime pay.

**WORK THIS PROBLEM***The Question:*

Mary worked 47 hours last week. Her regular pay rate is \$7.19 per hour. What is her regular pay, overtime rate, overtime pay, and gross pay?

**YOUR TURN****✓ YOUR WORK***The Solution:*

$$\text{Regular pay} = 40 \times \$7.19 = \$287.60$$

$$\text{Overtime rate} = 1\frac{1}{2} \times \$7.19 = \$10.785 \quad \leftarrow \text{Don't round here.}$$

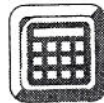
$$\text{Overtime pay} = 7 \times \$10.785 = \$75.495 = \$75.50 \quad \text{Rounded.}$$

$$\text{Gross pay} = \$287.60 + 75.50 = \$363.10$$

Of course, few businesspeople (if any) solve such problems by hand, preferring to use a calculator.

***Finding Overtime with a Calculator***

A calculator can be very handy when solving overtime pay problems with extra decimals. Begin by finding the regular pay. For the problem in the example, press



$$40 \times 7.19 = 287.6$$

If your calculator can store a number in memory, store this answer. If not, jot it down on a piece of paper.

Next, find the overtime pay by multiplying 1.5 by the regular rate by the number of overtime hours. Then add in the regular pay, either by hand or from the computer memory. The following shows how to complete this process:

$$1.5 \times 7.19 \times 7 = 75.495 \quad + \quad 287.6 = 363.095$$

Rounding this answer gives the same \$363.10.

We can easily incorporate the overtime calculations in the payroll sheet by adding columns for overtime hours, overtime rate, overtime pay, and gross pay.

**WORK THIS PROBLEM***The Question:*

Complete the following payroll sheet. Each employee's calculations should be made as in the previous problem. Add columns to find the totals for regular pay, overtime pay, and gross pay.

**YOUR TURN**

Name	Hours					Total Hours	Regular Hours	Regular Rate	O.T. Hours	O.T. Rate	Regular Pay	O.T. Pay	Gross Pay
	M	T	W	T	F								
Green, Jim	8	9	7	9	9			\$6.56					
O'Connor, Jerome	10	8	8	9	9			5.98					
Palmer, Albert	10	9	10	9	8			7.79					
Smith, William	8	8	7	8	8			6.42					
Van, Edward	8	9	8	10	8			6.16					
Totals													

✓ YOUR WORK

*The Solution:*

Name	Hours					Total Hours	Regular Hours	Regular Rate	O.T. Hours	O.T. Rate	Regular Pay	O.T. Pay	Gross Pay
	M	T	W	T	F								
Green, Jim	8	9	7	9	9	42	40	\$6.56	2	\$ 9.84	\$262.40	\$ 19.68	\$ 282.08
O'Connor, Jerome	10	8	8	9	9	44	40	5.98	4	8.97	239.20	35.88	275.08
Palmer, Albert	10	9	10	9	8	46	40	7.79	6	11.685	311.60	70.11	381.71
Smith, William	8	8	7	8	8	39	39	6.42	0	—	250.38	0	250.38
Van, Edward	8	9	8	10	8	43	40	6.16	3	9.24	246.40	27.72	274.12
Totals											\$1309.98	\$153.39	\$1463.37

Be careful with the third employee above. The overtime rate is  $1\frac{1}{2} \times \$7.79 = \$11.685$ . Do not round the overtime rate. Check your addition by adding the total regular pay and total overtime pay. This should equal the total gross pay:  $1309.98 + 153.39 = 1463.37$ .



Accuracy is essential! Whether you compute the payroll by hand or with a calculator, you should always check your answers. An incorrect answer will cost either the business or an employee money. It may possibly cost a job.

Now check your understanding of payroll calculations by completing the practice problems in Section Test 6.1.

## SECTION TEST 6.1 Payroll

Name \_\_\_\_\_

Date \_\_\_\_\_

Course/Section \_\_\_\_\_

The following questions test your understanding of Section 6.1, Paying Salaried and Hourly Employees.

**A. Convert the following annual salaries to the required pay period.**

- |                               |                                  |
|-------------------------------|----------------------------------|
| 1. \$22,380 = _____ monthly   | 2. \$23,640 = _____ semimonthly  |
| 3. \$31,800 = _____ monthly   | 4. \$25,870 = _____ biweekly     |
| 5. \$14,144 = _____ weekly    | 6. \$29,640 = _____ semimonthly  |
| 7. \$22,776 = _____ biweekly  | 8. \$23,660 = _____ weekly       |
| 9. \$41,100 = _____ monthly   | 10. \$25,800 = _____ semimonthly |
| 11. \$23,270 = _____ biweekly | 12. \$34,580 = _____ weekly      |

**B. Convert the following annual salaries to the various pay periods.**

Annual	Monthly	Semimonthly	Biweekly	Weekly
1. \$31,200				
2. 20,280				
3. 21,840				
4. 29,640				
5. 34,320				
6. 56,160				
7. 46,800				
8. 15,600				
9. 39,000				
10. 26,520				
11. 54,600				
12. 62,400				
13. 17,160				
14. 48,360				
15. 23,400				
16. 24,960				



C. Complete the following weekly payroll sheets.

1.

Name	Hours					Total Hours	Rate per Hour	Gross Pay
	M	T	W	T	F			
1. Bender, Keith	8	8	8	8	8		\$ 8.12	
2. Chao, I-Na	8	7	6	5	4		7.55	
3. Greenwood, Robert	6	8	5	8	7		6.38	
4. Luliak, John	7	8	8	8	7		9.83	
5. Pitt, David	8	6	0	8	6		10.27	
6. Rhine, Alan	8	0	8	0	8		9.42	
7. Tanner, Christie	8	7	7	7	8		6.83	
8. Vasquez, Jose	8	6	5	6	0		7.98	
Total								

2.

Name	Hours					Total Hours	Regular Hours	Regular Rate	O.T. Hours	O.T. Rate	Regular Pay	O.T. Pay	Gross Pay
	M	T	W	T	F								
1. Czarnecki, Randall	8	9	9	10	9			\$ 7.56					
2. Fazlian, Mohsen	9	9	9	9	9			8.24					
3. Hudson, Teresa	9	8	7	10	8			8.98					
4. Lawson, Dennis	9	9	10	9	7			9.48					
5. Martinez, Marie	10	10	10	10	10			10.52					
6. Ngvyen, Lam	9	8	7	6	5			9.46					
7. Querry, Frank	9	8	9	8	7			8.72					
8. Titus, Patrick	8	8	9	8	8			10.10					
Totals													

Name	Hours					Total Hours	Regular Hours	Regular Rate	O.T. Hours	O.T. Rate	Regular Pay	O.T. Pay	Gross Pay
	M	T	W	T	F								
1. Cramer, Marvin	8	9	10	9	8			\$ 9.27					
2. Etheredge, Hugh	8	8	9	9	9			9.45					
3. Lampron, George	9	8	7	6	5			8.52					
4. McCahe, Lowell	10	10	10	10	9			8.99					
5. Ngvyen, Tri	9	9	10	7	9			7.82					
6. Reed, Harold	9	8	9	8	9			7.95					
7. Tivis, Jerome	8	9	8	9	8			8.25					
8. Wood, Regena	9	8	7	9	10			9.77					
Totals													

Gross Pay

Gross Pay

## SECTION 6.2: Determining Piecework and Commission Pay



### Can You:

- Calculate piecework?
- Compute differential piecework pay?
- Pay commissions?
- Determine a sliding scale commission?
- Calculate salary plus commission?
- ... If not, you need this section.

### Calculating Piecework

**Piecework** Payment to individuals for their labor based on a rate per item produced.

Some businesses pay their employees based on actual production. One such method is by **piecework**, where each employee's pay is based on the number of pieces completed during a shift or work period. The gross pay is the product of the number of pieces and the rate per piece.

$$\text{Gross pay} = \text{number of pieces} \times \text{rate per piece}$$

For example, Brad works for the Big Ben Bolt Company, making steel bolts. If he earns \$0.23 per bolt and completed 337 in a day, what is his pay?

Number of pieces      Rate per piece  
  

$$\text{Gross pay} = 337 \times \$0.23 = \$77.51$$

Piecework calculations can be easily incorporated in a payroll sheet. This payroll sheet will include the employee's name, number of pieces completed per day, total pieces completed per week, rate per piece, and gross pay.



**YOUR TURN**

#### WORK THIS PROBLEM

##### The Question:

Complete the following payroll sheet by finding the total pieces and gross pay. Don't forget to total the gross pay column.

Name	Pieces Completed					Total Pieces	Rate	Gross Pay
	M	T	W	T	F			
Fillmore, Millie	40	38	35	42	41		\$1.94	
Harding, Warren	35	33	38	40	36		2.15	
Polk, James	26	27	22	24	25		2.21	
Taylor, Zachary	56	56	57	58	55		1.54	
Van Buren, Marsha	96	87	85	89	88		1.35	
Total								

## ✓ YOUR WORK

*The Solution:*

Name	Pieces Completed					Total Pieces	Rate	Gross Pay
	M	T	W	T	F			
Fillmore, Millie	40	38	35	42	41	196	\$1.94	\$ 380.24
Harding, Warren	35	33	38	40	36	182	2.15	391.30
Polk, James	26	27	22	24	25	124	2.21	274.04
Taylor, Zachary	56	56	57	58	55	282	1.54	434.28
Van Buren, Marsha	96	87	85	89	88	445	1.35	600.75
Total								\$2080.61

**Computing Differential Piecework****Differential Piecework**

Payment to individuals for their labor based on a series of rates per piece produced that increases as the number of pieces produced increases.

Some businesses use **differential piecework** as an incentive to increase production. This method uses a scale in which the rate per piece increases as the number of pieces completed increases. For example, the Ali Box Works pays its employees for each box constructed according to the following schedule:

1–100 boxes	@	\$0.29 each
101–150 boxes	@	\$0.31 each
151 boxes and up	@	\$0.34 each

If Ray constructed 162 boxes in a day, we can compute his gross pay as follows:

	Number of boxes	Rate
First 100	100 boxes	$\times \$0.29 = \$29.00$
101–150	50 boxes	$\times 0.31 = 15.50$
151–162 (162–150 = 12)	12 boxes	$\times 0.34 = 4.08$
		<u>\$48.58</u>

*Note:* Ray is not paid at the \$0.34 rate for all 162 boxes, only for those he constructed after he completed 150 boxes.

**YOUR TURN****WORK THIS PROBLEM***The Question:*

Signs of the Times pays its employees for each medium-sized sign by the following daily schedule:

1–12 signs	@	\$2.55 each
13–16 signs	@	2.65 each
17 signs and up	@	2.78 each

Calculate Mona's gross wages or total pay if she painted 18 signs in one day.

## ✓ YOUR WORK

*The Solution:*

First 12 signs	----->	$12 \times \$2.55 = \$30.60$
Signs 13-16	----->	$4 \times 2.65 = 10.60$
Signs 17-18	----->	$2 \times 2.78 = 5.56$
Gross wages	----->	$\$46.76$

In a differential piecework payroll sheet, the rate column is deleted, since the rate varies.



## WORK THIS PROBLEM

*The Question:***YOUR TURN**

Steele's Cabinet Shop pays its employees for each cabinet assembled per week according to the following schedule:

1-25 cabinets	@	\$12.45 each
26-30 cabinets	@	12.67 each
31 cabinets and up	@	12.98 each

Complete the following payroll sheet for Steele's Cabinet Shop.

Name	Cabinets per Day					Total Cabinets	Gross Wages
	M	T	W	T	F		
Baer, Max	6	6	5	6	5		
Douglas, Donna	6	5	5	5	4		
Radis, Mary	6	7	7	6	7		
Ryan, Corry	4	4	5	5	4		
Total							

## ✓ YOUR WORK

*The Solution:*

$$\begin{array}{l}
 \text{Baer, Max} \\
 25 \times \$12.45 = \$311.25 \\
 3 \times 12.67 = \underline{38.01} \\
 \qquad \qquad \qquad \$349.26
 \end{array}$$

$$\begin{array}{l}
 \text{Douglas, Donna} \\
 25 \times \$12.45 = \$311.25
 \end{array}$$

$$\begin{array}{l}
 \text{Radis, Mary} \\
 25 \times \$12.45 = \$311.25 \\
 5 \times 12.67 = \underline{63.35} \\
 3 \times 12.98 = \underline{38.94} \\
 \qquad \qquad \qquad \$413.54
 \end{array}$$

$$\begin{array}{l}
 \text{Ryan, Corry} \\
 22 \times \$12.45 = \$273.90
 \end{array}$$

Name	Cabinets per Day					Total Cabinets	Gross Wages
	M	T	W	T	F		
Baer, Max	6	6	5	6	5	28	\$ 349.26
Douglas, Donna	6	5	5	5	4	25	311.25
Radis, Mary	6	7	7	6	7	33	413.54
Ryan, Corry	4	4	5	5	4	22	273.90
Total							\$1347.95

If you are having trouble with these arithmetic calculations, return to Chapter 3 to review the addition and multiplication of decimal numbers.

## Paying Commission

**Commission** Payment to individuals for their labor based on a percentage of their total sales.

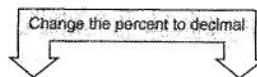
### Straight Commission

Payment to individuals for their labor based *solely* on a fixed percentage of their total sales.

Another procedure used for calculating wages is commission. A **commission** is usually paid to people selling merchandise. There are several different commission plans. The easiest to calculate is straight commission. In **straight commission** the commission is a percent of the total sales.

$$\text{Commission} = \text{rate of commission} \times \text{sales}$$

For example, Richard earns a 6% commission on his weekly sales. What was his commission for a week in which he sold \$4847.65 in merchandise?



$$6\% \times \$4847.65 = 0.06 \times \$4847.65 = \$290.859 = \$290.86 \text{ rounded}$$

Remember that you must always change a percent to a decimal number before multiplying. Most calculators do it automatically. If you are having difficulty changing 6% to a decimal, turn to Section 4.1.



**YOUR  
TURN**

### WORK THIS PROBLEM

#### The Question:

Eleanora earns a 5% commission on her weekly sales of dance equipment. What was her commission for a week in which she sold \$5958.76 in merchandise?

### ✓ YOUR WORK

#### The Solution:

$$5\% \times \$5958.76 = 0.05 \times \$5958.76 = \$297.938 = \$297.94 \text{ rounded}$$

## Determining Sliding Scale Commissions

### Sliding Scale Commission

Payment to individuals for their labor based *solely* on a percent of their total sales, with the percent increasing as sales increase.

A second method of calculating commissions uses a sliding scale. Much like differential piecework, **sliding scale commission** rewards employees for increased production. The commission rate increases as sales increase. For example, the Wilton Sporting Goods Supply Company pays its employees on the following weekly schedule:

4% on sales up to \$4000  
 5% on sales from over \$4000 to \$6000  
 6% on sales over \$6000

What were Bo's gross wages for a week in which he had a sales total of \$7663.40?

First \$4000	$4\% \times \$4000 = 0.04 \times \$4000 = \$160.00$
\$4000 to \$6000	$5\% \times 2000 = 0.05 \times 2000 = 100.00$
Over \$6000	$6\% \times 1663.40 = 0.06 \times 1663.40 = \underline{99.80}$ rounded
	\$359.80

If you have trouble changing fractional percents such as  $7\frac{1}{2}\%$  and  $8\frac{1}{4}\%$  to decimal numbers, review Section 4.1.



**YOUR  
TURN**

### WORK THIS PROBLEM

#### The Question:

Yucks Novelty Company pays its salespeople on the following weekly schedule:

7% on sales up to \$8000  
 $7\frac{1}{2}\%$  on sales from over \$8000 to \$10,000  
 $8\frac{1}{4}\%$  on sales over \$10,000

Complete the following payroll sheet.

Name	Sales	Gross Wages
Barr, Rose	\$ 9567.42	
Bird, Jay	7526.98	
Williams, Robert	10,846.29	
Total		

### ✓ YOUR WORK

#### The Solution:

Barr, Rose

$$7\% \times \$8000.00 = 0.07 \times \$8000.00 = \$560.00$$

$$7\frac{1}{2}\% \times 1567.42 = 0.075 \times 1567.42 = \underline{117.56} \text{ rounded}$$

$$\text{Total} = \$677.56$$

Bird, Jay

$$7\% \times \$7526.98 = 0.07 \times \$7526.98 = \$526.89 \text{ rounded}$$

Williams, Robert

$$7\% \times \$8000.00 = 0.07 \times \$8000.00 = \$560.00$$

$$7\frac{1}{2}\% \times 2000.00 = 0.075 \times 2000.00 = 150.00$$

$$8\frac{1}{4}\% \times 846.29 = 0.0825 \times 846.29 = \underline{69.82} \text{ rounded}$$

$$\underline{\$779.82}$$

Name	Sales	Gross Wages
Barr, Rose	\$ 9567.42	\$677.56
Bird, Jay	7526.98	526.89
Williams, Robert	10,846.29	779.82
Total		\$1984.27

## Calculating Salary Plus Commission

### Salary Plus Commission

Payment to individuals for their labor based on a combination of salary and either a straight or a sliding scale commission.

A third method of calculating commissions is **salary plus commission**. The salary assures employees of a regular income, and the commission acts as an incentive plan. With this method, you calculate the commission and add it to the salary to compute the gross pay.

For example, Marissa earns a weekly salary of \$335.50 plus a commission of 4½% on her total sales. Let's calculate Marissa's gross pay for a week with total sales of \$1295.98.

$$\begin{aligned} \text{Commission} &= 4.5\% \times \$1295.98 = 0.045 \times \$1295.98 = \$58.32 \text{ rounded} \\ \text{Salary} &= + \$335.50 \\ \text{Gross Pay} &= \underline{\$393.82} \end{aligned}$$



Never multiply by a percent. *Always* change the percent to a decimal number first or use a calculator with a percent key.



### WORK THIS PROBLEM

#### The Question:

The Chic Boutique pays each salesperson a salary plus a commission of 5% on his or her total sales for the week. Complete the following payroll sheet.

**YOUR TURN**

Name	Weekly Salary	Sales	Commission	Gross Pay
Sprat, Jack	\$225.50	\$8475.60		
Tinkerbelle	217.75	5024.50		
Oz, Dorothy	232.25	6754.90		
Draper, Donna	221.40	5174.90		
Total				



✓ YOUR WORK

The Solution:

Name	Weekly Salary	Sales	Commission	Gross Pay
Sprat, Jack	\$225.50	\$8475.60	\$423.78	\$ 649.28
Tinkerbell	217.75	5024.50	251.23	468.98
Oz, Dorothy	232.25	6754.90	337.75	570.00
Draper, Donna	221.40	5174.90	258.75	480.15
Total				\$2168.41

Once again, businesspeople generally use calculators to perform these calculations.

**Determining Salary Plus Commission with a Calculator**

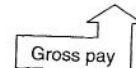
You can use a calculator to find salary plus commission in one smooth flow. For example, in the case of Mr. Sprat,



$$8475.6 \times .05 = 423.78 \quad + \quad 225.5 = 649.28$$

Using a business calculator with a percent key,

$$8475.6 \times 5 \% = 423.78 \quad + \quad 225.5 = 649.28$$



Be sure to check your understanding by working through the practice problems in Section Test 6.2.

## CASE STUDY 6

### *The MegaBucks Payroll*

ve in charge of payroll for Mega Corpora-  
eise a payroll system that will allow each  
ortunity to make \$500 per week. Help her  
g calculations. Round all answers to nearest

urs will a person making \$10.25 per hour  
to make \$500?

ple earn a base of \$225 with 7%  
n all sales. How much will a salesperson  
order to earn \$500?

3. Some of the salespeople work on straight commission. What will sales have to be to earn \$500 if the commission is 12%?
4. A few people in production prefer a piecework pay scale. If they are paid \$2.60 for each box of bucks, how many boxes will such a worker have to fill to earn \$500?

## SECTION TEST 6.2 Payroll

The following problems test your understanding of Section 6.2, Determining Piecework and Commission Pay.

e/Section

A. Complete the following piecework payroll sheet.

Name	Pieces Completed					Total Pieces	Rate	Gross Pay
	M	T	W	T	F			
1. Adams, Charles	40	42	38	36	35		\$2.25	
2. Bilbery, Dianna	42	45	39	40	41		2.30	
3. Chandler, Donald	40	42	38	36	35		2.15	
4. Herrmann, Kay	41	40	45	38	40		2.27	
5. McGee, George	35	34	34	36	35		1.98	
6. Nelson, Christina	45	44	44	46	45		2.42	
7. Ta, Long	42	42	41	41	41		2.31	
8. Vanbeber, Jerry	39	42	37	39	40		2.19	

B. Complete the following payroll sheet.

The Pelota Bearing Company pays its employees on a piecework basis using the following schedule:

1-200	@	\$1.50
201-250	@	1.75
251 and up	@	1.95

Name	Bearings per Day					Total	Gross Wages
	M	T	W	T	F		
1. Ashley, Glenda	52	55	50	49	52		
2. Custer, Bradley	40	41	39	38	40		

**C. Complete the monthly payroll sheet.**

The Platt Realty Company pays its salespeople a straight  $3\frac{1}{2}\%$  commission.

Name	Total Sales	Gross Pay
1. Flickinger, Jeffrey	\$ 65,590	
2. Greer, Robyn	92,650	
3. Marshall, Pamela	135,900	
4. Perdue, Melissa	42,750	
5. Scaramucci, Todd	85,220	
6. Thompson, Cheryl	152,890	
7. Wallace, LaVonna	95,500	
8. Wehba, David	55,555	

**D. Complete the following weekly payroll sheet.**

The Phyle Office Products Company pays its salespeople on the following weekly schedule:

- $1\frac{1}{2}\%$  on sales up to \$18,000
- 2% on sales from over \$18,000 to \$25,000
- $2\frac{1}{2}\%$  on sales over \$25,000

Name	Total Sales	Gross Pay
1. Cook, Michael	\$18,952	
2. Forth, Christy	22,765	
3. Gaines, Phillip	15,691	
4. Ishmael, Jonathan	25,772	
5. Leonard, James	16,973	
6. Newell, Pamela	32,782	
7. Reed, Linda	21,105	
8. Sounders, Jeff	28,098	

**E. Complete the weekly payroll sheet.**

Radical Radials pays its salespeople a weekly salary plus a  $5\frac{1}{4}\%$  commission on their sales.

Name	Salary	Sales	Commission	Gross Pay
1. Greg, Kristy	\$180	\$3527		
2. Miller, Margaret	145	2365		
3. Nevels, James	130	2450		
4. Quiroz, Marica	145	2935		
5. Robertson, Richard	180	3285		
6. Southern, Dawn	160	2962		
7. Taliaferro, Beatrice	145	2658		
8. Wolf, Mark	190	3502		

**F. Solve these problems.**

1. Claudia pays her operators in Claudia's Clip-Joint an hourly wage plus a 7% commission on product sales and a 3% commission on services. Joan, who receives \$6.25 per hour, provided services totaling \$735 and sold products worth \$152 last week while working 40 hours. What was Joan's gross pay?
2. Sally, another of Claudia's operators, receives \$6.52 per hour, with time-and-a half for overtime (over 40 hours per week), along with the 7% commission on sales and the 3% commission on services. Last week Sally worked 43.5 hours, provided services worth \$896, and sold products totaling \$205. What was Sally's gross pay?

## SECTION 6.3: Federal Income Tax, FICA, and Federal Unemployment Tax



### Can You:

- Determine federal income tax by the wage bracket method?
- Calculate federal income tax by the percentage method?
- Compute FICA and Federal Unemployment Tax?
- ... If not, you need this section.

Monies sub-  
gross pay to  
s of federal,  
ome tax with-  
health insur-  
rance, annu-  
ies, and so

Look at any paycheck and you're sure to spot a large difference between wages or salary and what an employee actually gets to take home. The difference is the **deductions** subtracted.

Common deductions include federal income tax, FICA (Social Security and Medicare), state and city income taxes, health insurance, life insurance, annuities, and more. At times, the list seems endless and the total is staggering.

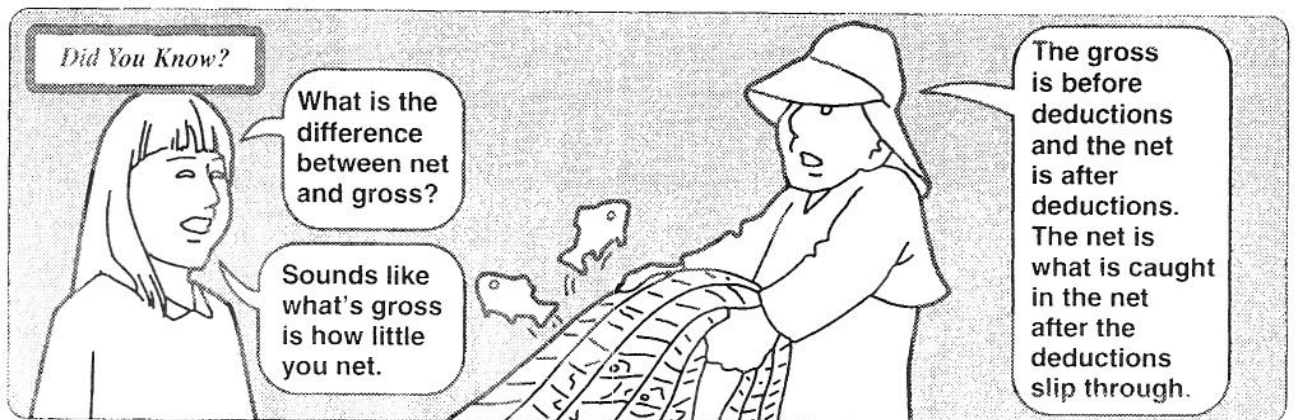
$$\text{Total deductions} = \text{sum of all deductions}$$

arnings  
ductions.

In Chapter 6, we calculated **gross pay**—earnings before any deductions. **Net pay**—“take-home pay”—is pay *after* deductions.

$$\text{Net pay} = \text{gross pay} - \text{total deductions}$$

nings after all



## Understanding Federal Income Tax

ne Tax  
(FIT)

Usually, the largest deduction from a paycheck is the **federal income tax (FIT)**. Employers are required to *withhold* a certain amount from each paycheck and to keep records of each

1 This is a  
2 Employer  
3 number

1

2 AMOUNT OF DEPOSIT (Do NOT type; please print.)  
DOLLARS CENTS

3 Marked only one TYPE OF TAX

4 Marked only one TAX PERIOD

1 LILIAN SMITH & PAUL JONES  
L & P GRAPHICS  
2025 MAIN STREET  
ANYTOWN MD 99009

EIN 12-3456789

IRS USE ONLY

5 FOR BANK USE IN MICR ENCODING

one number ( )

visit Coupon

<input type="checkbox"/> 941	<input type="checkbox"/> Sch A	<input type="checkbox"/> 1st Quarter
<input type="checkbox"/> 990C	<input type="checkbox"/> 1120	<input type="checkbox"/> 2nd Quarter
<input type="checkbox"/> 943	<input type="checkbox"/> 9901	<input type="checkbox"/> 3rd Quarter
<input type="checkbox"/> 720	<input type="checkbox"/> 990PF	<input type="checkbox"/> 4th Quarter
<input type="checkbox"/> CT-1	<input type="checkbox"/> 1042	
<input type="checkbox"/> 940		

Finally, federal laws require all employees to file a "W4" form that declares the number of exemptions they wish to claim. An exemption is an allowance for a member of the household. A W4 form *must* be filed before income tax can be computed.

**W-4** Employee's Withholding Allowance Certificate

Form Department of the Treasury Internal Revenue Service

OMB No. 1545-0010

2000

1 Type or print your first name and middle initial Last name

2 Your social security number

Home address (number and street or rural route)

City or town, state, and ZIP code

3 Marital status

Single  Married

Married, but withhold at Higher Single rate.

Note: If married, but legally separated, or spouse is a nonresident alien, check the Single box

4 Total number of allowances you are claiming (from line G above or from the Worksheets on back if they apply) 4

5 Additional amount, if any, you want deducted from each pay 5 \$

6 I claim exemption from withholding and I certify that I meet ALL of the following conditions for exemption:

- Last year I had a right to a refund of ALL Federal income tax withheld because I had NO tax liability; AND
- This year I expect a refund of ALL Federal income tax withheld because I expect to have NO tax liability; AND
- This year if my income exceeds \$550 and includes nonwage income, another person cannot claim me as a dependent.

If you meet all the above conditions, enter the year effective and "EXEMPT" here

7 Are you a full-time student? (Note: Full-time students are not automatically exempt.) 6 19 7  Yes  No

Under penalties of perjury, I certify that I am entitled to the number of withholding allowances claimed on this certificate or entitled to claim exempt status

Employee's signature

Date

8 Employer's name and address (Employer: Complete 8 and 10 only if sending to IRS)

9 Office code (optional)

10 Employer identification number

## Using the Wage Bracket Method

Persons—WEEKLY Payroll Period  
(sample table)

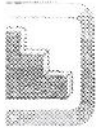
less than	And the number of withholding allowances claimed is—										
	0	1	2	3	4	5	6	7	8	9	10
	The amount of income tax to be withheld is—										
55	0	0	0	0	0	0	0	0	0	0	0
60	1	0	0	0	0	0	0	0	0	0	0
65	2	0	0	0	0	0	0	0	0	0	0
70	3	0	0	0	0	0	0	0	0	0	0
75	3	0	0	0	0	0	0	0	0	0	0
80	4	0	0	0	0	0	0	0	0	0	0
85	5	0	0	0	0	0	0	0	0	0	0
90	6	0	0	0	0	0	0	0	0	0	0
95	6	0	0	0	0	0	0	0	0	0	0
00	7	0	0	0	0	0	0	0	0	0	0
05	8	1	0	0	0	0	0	0	0	0	0
10	9	1	0	0	0	0	0	0	0	0	0
15	9	2	0	0	0	0	0	0	0	0	0
20	10	3	0	0	0	0	0	0	0	0	0
25	11	4	0	0	0	0	0	0	0	0	0
30	12	4	0	0	0	0	0	0	0	0	0
35	12	5	0	0	0	0	0	0	0	0	0
40	13	5	0	0	0	0	0	0	0	0	0
45	14	7	0	0	0	0	0	0	0	0	0
50	15	7	0	0	0	0	0	0	0	0	0
55	15	8	1	0	0	0	0	0	0	0	0
60	16	9	2	0	0	0	0	0	0	0	0
65	17	10	2	0	0	0	0	0	0	0	0
70	18	10	3	0	0	0	0	0	0	0	0
75	18	11	4	0	0	0	0	0	0	0	0
80	19	12	5	0	0	0	0	0	0	0	0
85	20	13	5	0	0	0	0	0	0	0	0
90	21	13	6	0	0	0	0	0	0	0	0
95	21	14	7	0	0	0	0	0	0	0	0
00	22	15	8	0	0	0	0	0	0	0	0
10	23	16	9	2	0	0	0	0	0	0	0
20	25	18	10	3	0	0	0	0	0	0	0
30	26	19	12	5	0	0	0	0	0	0	0
40	28	21	13	6	0	0	0	0	0	0	0
50	29	22	15	8	0	0	0	0	0	0	0
60	31	24	16	9	2	0	0	0	0	0	0
70	32	25	18	11	3	0	0	0	0	0	0
80	34	27	19	12	5	0	0	0	0	0	0
90	35	28	21	14	6	0	0	0	0	0	0
90	37	30	22	15	8	1	0	0	0	0	0
10	38	31	24	17	9	2	0	0	0	0	0
20	40	33	25	18	11	4	0	0	0	0	0
30	41	34	27	20	12	5	0	0	0	0	0
40	43	36	28	21	14	7	0	0	0	0	0
50	44	37	30	23	15	8	1	0	0	0	0
50	46	39	31	24	17	10	2	0	0	0	0
70	47	40	33	26	18	11	4	0	0	0	0
80	49	42	34	27	20	13	5	0	0	0	0
90	50	43	36	29	21	14	7	0	0	0	0
90	52	45	37	30	23	16	8	1	0	0	0
10	53	46	39	32	24	17	10	3	0	0	0
20	55	48	40	33	26	19	11	4	0	0	0
30	56	49	42	35	27	20	13	6	0	0	0
40	58	51	43	36	29	22	14	7	0	0	0
50	59	52	45	38	30	23	16	9	2	0	0
50	61	54	46	39	32	25	17	10	3	0	0
70	62	55	48	41	33	26	19	12	5	0	0



# D Persons—WEEKLY Payroll Period

(sample table)

But less than	And the number of withholding allowances claimed is—										
	0	1	2	3	4	5	6	7	8	9	10
	The amount of income tax to be withheld is										
\$125	0	0	0	0	0	0	0	0	0	0	0
130	1	0	0	0	0	0	0	0	0	0	0
135	1	0	0	0	0	0	0	0	0	0	0
140	2	0	0	0	0	0	0	0	0	0	0
145	3	0	0	0	0	0	0	0	0	0	0
150	4	0	0	0	0	0	0	0	0	0	0
155	4	0	0	0	0	0	0	0	0	0	0
160	5	0	0	0	0	0	0	0	0	0	0
165	6	0	0	0	0	0	0	0	0	0	0
170	7	0	0	0	0	0	0	0	0	0	0
175	7	0	0	0	0	0	0	0	0	0	0
180	8	1	0	0	0	0	0	0	0	0	0
185	9	2	0	0	0	0	0	0	0	0	0
190	10	2	0	0	0	0	0	0	0	0	0
195	10	3	0	0	0	0	0	0	0	0	0
200	11	4	0	0	0	0	0	0	0	0	0
210	12	5	0	0	0	0	0	0	0	0	0
220	13	6	0	0	0	0	0	0	0	0	0
230	13	6	0	0	0	0	0	0	0	0	0
235	14	7	0	0	0	0	0	0	0	0	0
240	17	10	2	0	0	0	0	0	0	0	0
250	18	11	4	0	0	0	0	0	0	0	0
260	20	13	5	0	0	0	0	0	0	0	0
270	21	14	7	0	0	0	0	0	0	0	0
280	23	16	8	1	0	0	0	0	0	0	0
290	24	17	10	3	0	0	0	0	0	0	0
300	26	19	11	4	0	0	0	0	0	0	0
310	27	20	13	6	0	0	0	0	0	0	0
320	29	22	14	7	0	0	0	0	0	0	0
330	30	23	16	9	1	0	0	0	0	0	0
340	32	25	17	10	3	0	0	0	0	0	0
350	33	26	19	12	4	0	0	0	0	0	0
360	35	28	20	13	6	0	0	0	0	0	0
370	36	29	22	15	7	0	0	0	0	0	0
380	38	31	23	16	9	2	0	0	0	0	0
390	39	32	25	18	10	3	0	0	0	0	0
400	41	34	26	19	12	5	0	0	0	0	0
410	42	35	28	21	13	6	0	0	0	0	0
420	44	37	29	22	15	8	1	0	0	0	0
430	45	38	31	24	16	9	2	0	0	0	0
440	47	40	32	25	18	11	4	0	0	0	0
450	48	41	34	27	19	12	5	0	0	0	0
460	50	43	35	28	21	14	7	0	0	0	0
470	51	44	37	30	22	15	8	1	0	0	0
480	53	46	38	31	24	17	10	2	0	0	0
490	54	47	40	33	25	18	11	4	0	0	0
500	56	49	41	34	27	20	13	5	0	0	0
510	57	50	43	36	28	21	14	7	0	0	0
520	59	52	44	37	30	23	16	8	1	0	0
530	60	53	46	39	31	24	17	10	3	0	0
540	62	55	47	40	33	26	19	11	4	0	0
550	63	56	49	42	34	27	20	13	6	0	0
560	65	58	50	43	36	29	22	14	7	0	0
570	66	59	52	45	37	30	23	16	9	1	0
580	68	61	53	46	39	32	25	17	10	3	0
590	69	62	55	48	40	33	26	19	12	4	0
600	71	64	56	49	42	35	28	20	13	6	0
610	72	65	58	51	43	36	29	22	15	7	0



## Steps: Calculating Federal Income Tax by the Wage Bracket Method

- STEP 1.** *Locate* the correct payroll period and marital status table.
- STEP 2.** *Find* the correct wage bracket in the two leftmost columns. This gives the correct row. When reading the column headings, be very careful. “But less than 280” means smaller than 280. That includes \$279.99, but not \$280.
- STEP 3.** *Move* right in the row to the column with the correct number of exemptions. This figure is the federal income tax.

For example, Abby Adams is single and declares one exemption. Calculate her federal income tax (FIT) by the wage bracket method on her weekly wage of \$379.36.

- Step 1.** Use the “SINGLE Persons—WEEKLY Payroll Period” table.
- Step 2.** The current wage bracket is “at least 370, but less than 380.”
- Step 3.** The correct FIT amount in the “1 exemption” column is \$42.



### WORK THIS PROBLEM

#### The Question:

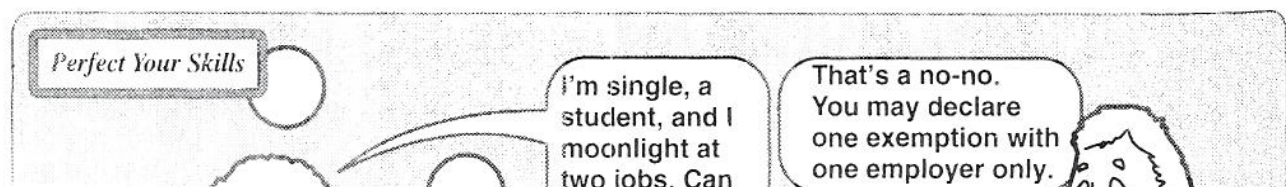
James Buchanan earned \$715.46 last week. He is married and declares four exemptions. Assume you are his employer, and compute his federal income tax (FIT) by the wage bracket method.

### ✓ YOUR WORK

#### The Solution:

- Step 1.** Use the Married Weekly table.
- Step 2.** The weekly wage is \$715.46. It’s in the row “at least 710, but less than 720.”
- Step 3.** Move right in the row to 4 exemptions. The FIT is \$60.

Isn’t it easy? But remember, check each answer. Accuracy is very important in any business problem, especially payroll.



Perfect Your Skills

I'm single, a student, and I moonlight at two jobs. Can

That's a no-no. You may declare one exemption with one employer only.

## Applying the Percentage Method

**Method** A  
calculating fed-  
withhold-  
by comput-



indicated

Many employers prefer to use the **percentage method**, especially those using computer payrolls. This method has three steps:

### Steps: Calculating Federal Income Tax by the Percentage Method

**STEP 1.** Use the “Percentage Method—Amount for One Withholding Allowance” table that follows to find the amount of withholding allowance for the payroll period. Multiply this amount by the number of exemptions and subtract from gross wages.

#### PERCENTAGE METHOD— AMOUNT FOR ONE WITHHOLDING ALLOWANCE

Payroll Period	One Withholding Allowance
Weekly	\$48.08
Biweekly	96.15
Semimonthly	104.17
Monthly	208.33
Quarterly	625.00
Semiannually	1,250.00
Annually	2,500.00
Daily or miscellaneous (each day of the payroll period)	9.62

**STEP 2.** In the “Tables for Percentage Method of Withholding,” *find* the correct table for the pay period and marital status.

**STEP 3.** *Locate* the correct wage bracket for the amount found in Step 1 (not the gross wage) in the two leftmost columns. Perform the calculation on the right.

For example, Mary Todd is married and declares two exemptions. Compute her federal income tax by the percentage method for a month in which she earned \$4,107.49.

**Step 1.** Since she is paid monthly, the withholding allowance from the table is \$208.33. For two exemptions the allowance is  $2 \times \$208.33 = \$416.66$ . Subtract \$416.66 from her gross wages.

$$\begin{array}{r}
 \$4107.49 \\
 - 416.66 \\
 \hline
 \$3690.83
 \end{array}$$

←  $2 \times \$208.33$

The phrase “of excess over \$3,588” means her wage (from step 1, not her gross wage) minus \$3,588. The remainder of the calculation—the “%-of” problem—is just like the ones we worked in Chapter 4.

This method is a little longer than the wage bracket method. But with a little practice, it’s as easy. The IRS has mainframe computers, and virtually every business today uses calculators or computers to find FIT.

### *Using a Calculator to Find FIT by the Percentage Method*

When finding the FIT by the percentage method, you can do the calculations in one long step on your calculator and round the final answer.

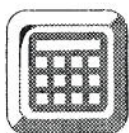
In our example, we must calculate

$$\text{FIT} = 458.25 + (0.28 \times (3690.83 - 3588))$$

If you have parentheses on your calculator, just key in the preceding sequence, beginning with 458.25 and ending with an equal sign [=].

If you don’t have parentheses, you must do the operation in the double parentheses first, then the operation in the single parentheses.

$$\text{FIT} = 3690.83 \text{ [-] } 3588 \text{ [=] } \times 28 \text{ [%] } + 458.25 \text{ [=] } 487.0424$$



**YOUR  
TURN**

#### WORK THIS PROBLEM

##### *The Question:*

James Buchanan earned \$1185.46 last week. He is married and declares four exemptions. Compute his federal income tax by the percentage method.

#### ✓ YOUR WORK

##### *The Solution:*

**Step 1.** Since he is paid weekly, the withholding allowance is \$48.08. For four exemptions, the allowance is  $4 \times \$48.08 = \$192.32$ .

$$\begin{array}{r} \$1185.46 \\ -192.32 \\ \hline \$ 993.14 \end{array} \quad \leftarrow 4 \times \$48.08$$

Tables for Percentage Method of Withholding  
(sample table)

**TABLE 1—WEEKLY Payroll Period**

(a) SINGLE person— (including head of household)— If the amount of wages (after subtracting withholding allowances) is:		(b) MARRIED person— If the amount of wages (after subtracting withholding allowances) is:		The amount of income tax to withhold is:	
Not over \$0		Not over \$123		\$0	
<b>not over—</b>	<b>of excess over—</b>	<b>Over—</b>	<b>But not over—</b>	<b>of excess over—</b>	
476	15% —\$50	\$123	—\$828	15%	—\$123
999	\$63.90 plus 28% —\$476	\$828	—\$1,664	\$105.75 plus 28%	—\$828
2,295	\$210.34 plus 31% —\$999	\$1,664	—\$2,839	\$339.83 plus 31%	—\$1,664
4,960	\$612.10 plus 36% —\$2,295	\$2,839	—\$5,011	\$704.08 plus 36%	—\$2,839
	\$1,571.50 plus 39.6%—\$4,960	\$5,011		\$1,486.00 plus 39.6%	—\$5,011

**TABLE 2—BIWEEKLY Payroll Period**

(a) SINGLE person— (including head of household)— If the amount of wages (after subtracting withholding allowances) is:		(b) MARRIED person— If the amount of wages (after subtracting withholding allowances) is:		The amount of income tax to withhold is:	
Not over \$0		Not over \$246		\$0	
<b>not over—</b>	<b>of excess over—</b>	<b>Over—</b>	<b>But not over—</b>	<b>of excess over—</b>	
952	15% —\$100	\$246	—\$1,656	15%	—\$246
1,998	\$127.80 plus 28% —\$952	\$1,656	—\$3,329	\$211.50 plus 28%	—\$1,656
4,590	\$420.68 plus 31% —\$1,998	\$3,329	—\$5,679	\$679.94 plus 31%	—\$3,329
9,919	\$1,224.20 plus 36% —\$4,590	\$5,679	—\$10,021	\$1,408.44 plus 36%	—\$5,679
	\$3,142.64 plus 39.6%—\$9,919	\$10,021		\$2,971.56 plus 39.6%	—\$10,021

**TABLE 3—SEMIMONTHLY Payroll Period**

(a) SINGLE person— (including head of household)— If the amount of wages (after subtracting withholding allowances) is:		(b) MARRIED person— If the amount of wages (after subtracting withholding allowances) is:		The amount of income tax to withhold is:	
Not over \$0		Not over \$267		\$0	
<b>not over—</b>	<b>of excess over—</b>	<b>Over—</b>	<b>But not over—</b>	<b>of excess over—</b>	
1,031	15% —\$108	\$267	—\$1,794	15%	—\$267
2,165	\$138.45 plus 28% —\$1,031	\$1,794	—\$3,606	\$229.05 plus 28%	—\$1,794
4,973	\$455.97 plus 31% —\$2,165	\$3,606	—\$6,152	\$736.41 plus 31%	—\$3,606
10,746	\$1,326.45 plus 36% —\$4,973	\$6,152	—\$10,856	\$1,525.67 plus 36%	—\$6,152
	\$3,404.73 plus 39.6%—\$10,746	\$10,856		\$3,219.11 plus 39.6%	—\$10,856

**TABLE 4—MONTHLY Payroll Period**

(a) SINGLE person— (including head of household)— If the amount of wages (after subtracting withholding allowances) is:		(b) MARRIED person— If the amount of wages (after subtracting withholding allowances) is:	
Not over \$0		Not over \$534	

If we worked the same problem by the wage bracket method we would get a slightly different answer, \$152.

Yes, you will get different answers with each method. But if you use the amount in the middle of the wage bracket interval (the average), you will get approximately the same answer with both methods.

Try computing the income tax on a weekly wage of \$1185.00, married with four exemptions. The tax is \$152 with the wage bracket method and \$151.86 with the percentage method. The wage \$1185.00 is in the middle of the interval "at least \$1180, but less than \$1190." Rounding \$151.86 to the nearest dollar produces \$152 and gives the same answer with both methods.



**YOUR  
TURN**

**WORK THIS PROBLEM**

**The Question:**

Find the federal income tax to be deducted for each of the following employees by the percentage method.

Name	Marital Status	Exemptions	Semimonthly Wage	Income Tax
Bow, Edie	Single	2	\$1319.50	
Dean, L. L.	Married	4	1447.25	
Nickel, J. C.	Single	1	1346.27	
Vernon, Jill	Married	3	2145.65	

**✓ YOUR WORK**

**The Solution:**

Bow, Edie: 2 exemptions  $\times$  \$104.17 = \$208.34

**Step 1.**  $\$1319.50 - 208.34 = \$1111.16$

**Step 2.** Use the SEMIMONTHLY Payroll Period, SINGLE table, Table 3(a).

**Step 3.** FIT = \$138.45 plus 28% of excess over \$1031  
 $= 138.45 + [28\% \times (1111.16 - 1031)]$   
 $= 138.45 + [0.28 \times 80.16]$   
 $= 138.45 + 22.4448 = \$160.89$  rounded

Dean, L. L.: 4 exemptions  $\times$  \$104.17 = \$416.68

**Step 1.**  $\$1447.25 - 416.68 = \$1030.57$

Step 3. FIT = \$138.45 plus 28% of excess over \$1031  
 = 138.45 + [28% × (1242.10 – 1031)]  
 = 138.45 + [0.28 × 211.10]  
 = 138.45 + 59.108 = \$197.56 rounded

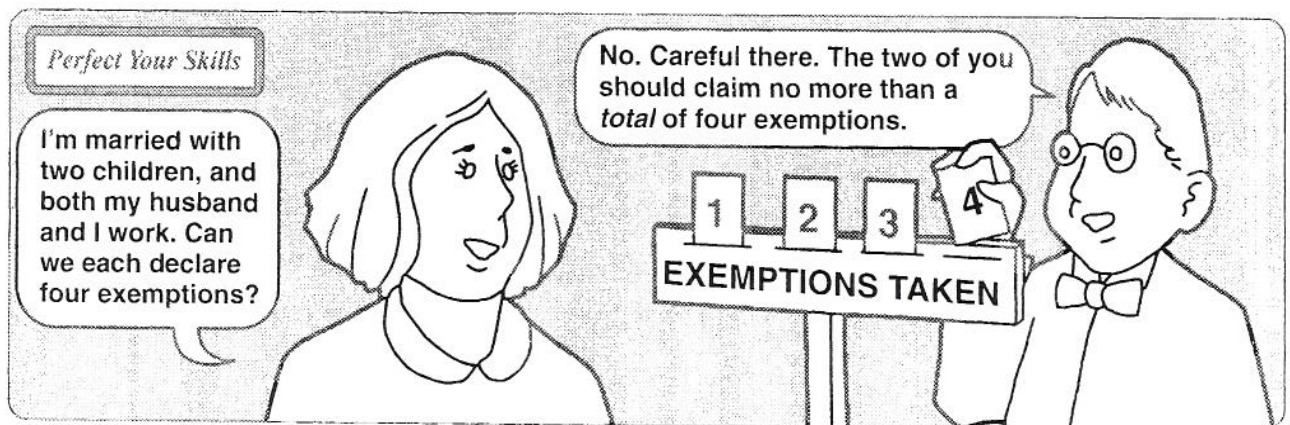
Vernon, Jill: 3 exemptions × \$104.17 = \$312.51

Step 1. \$2145.65 – 312.51 = \$1833.14

Step 2. Use the SEMIMONTHLY Payroll Period, MARRIED table, Table 3(b).

Step 3. FIT = \$229.05 plus 28% of excess over \$1794  
 = 229.05 + [28% × (1833.14 – 1794)]  
 = 229.05 + [0.28 × 39.14]  
 = 229.05 + 10.9592 = \$240.01 rounded

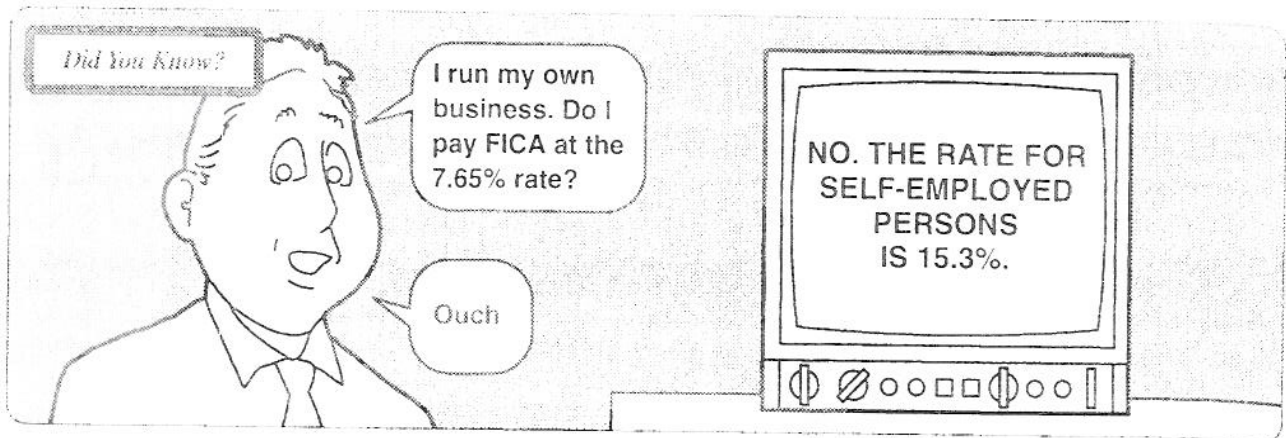
Name	Marital Status	Exemptions	Semimonthly Wage	FIT
Bow, Edie	Single	2	\$1319.50	\$160.89
Dean, L. L.	Married	4	1447.25	114.54
Nickel, J. C.	Single	1	1346.27	197.56
Vernon, Jill	Married	3	2145.65	240.01



## Computing FICA

insurance  
 Act)  
 social Secu-

Another required deduction is **FICA (Federal Insurance Contributions Act)**, commonly known as Social Security. When FICA was started in 1937, the original FICA rate was 1% on the first \$3000 in wages. As the cost of Medicare and Social Security increased, the rate



In 1991, the IRS divided the FICA into two categories: Social Security and Medicare. The IRS now requires each to be reported separately. The Social Security rate is 6.2% with a wage base of \$76,200. The Medicare rate is 1.45% on all wages. The total one is  $6.2\% + 1.45\% = 7.65\%$ .

### 2000 FICA Rates

	Rate	Wage Base
Social Security	6.2%	\$76,200
Medicare	1.45%	unlimited

There are two methods of calculating FICA: the table “lookup” method and the percentage method. Both methods give the same result. The table lookup method uses the relevant tables in IRS Circular E. The percentage method is the easiest method. You simply multiply gross pay by the Social Security and Medicare rates and round when necessary.

$$\text{Social Security} = 6.2\% \times \text{gross pay}$$

$$\text{Medicare} = 1.45\% \times \text{gross pay}$$

For example, let's calculate the Social Security and Medicare withholding on a monthly wage of \$2865.

$$\begin{aligned} \text{Social Security} &= 6.2\% \times \text{gross pay} \\ &= 0.062 \times \$2865 = \$177.62 \end{aligned}$$





**YOUR TURN**

**WORK THIS PROBLEM**

*The Question:*

Calculate the Social Security and Medicare withholding on a monthly wage of \$1956.85.

**✓ YOUR WORK**

*The Solution:*

$$\begin{aligned} \text{Social Security} &= 6.2\% \times \$1956.85 \\ &= 0.062 \times \$1956.85 = \$121.32 \text{ rounded} \\ \text{Medicare} &= 1.45\% \times \$1956.85 \\ &= 0.0145 \times \$1956.85 = \$28.37 \text{ rounded} \end{aligned}$$

In addition to federal income and FICA taxes, many other deductions are frequently made. Each state requires a state income tax to be withheld. Although the state tax tables vary from state to state, the withholding methods are similar to those for the federal tax. Other possible deductions include health insurance, life insurance, union dues, annuities, bond purchases, retirement plans, and so on. The list seems endless.

A statement of deductions must be added to the payroll sheet. Starting with the gross pay, calculate the federal income tax and FICA. The total deductions will be the sum of federal income tax, FICA, and the other deductions. The net pay will be the gross pay minus the total deductions.

For example, if your gross pay is \$2576.42, your FIT is \$445.58, your Social Security is \$159.74, your Medicare is \$37.36, and your health insurance is \$252.22. Your net pay will be

$$\begin{aligned} \text{Net pay} &= \text{gross pay} - \text{total deductions} \\ &= \$2576.42 - (445.58 + 159.74 + 37.36 + 252.22) \\ &= \$2576.42 - 894.90 = \$1681.52 \end{aligned}$$



**YOUR TURN**

**WORK THIS PROBLEM**

*The Question:*

Complete the following weekly payroll sheet. Don't forget to total the gross pay, federal income tax, FICA, other deductions, total deductions, and net pay columns. Use the wage bracket method to calculate the federal income tax.

Marital Status	No. of Exemptions	Gross Pay	FICA	Social Security	Federal Income Tax	Other	Total	Net
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✓ YOUR WORK

The Solution:

Marital Status	No. of Exemptions	Gross Pay	FIT	Social Security	Medicare	Other Deductions	Total Deductions	Net Pay
S	1	\$ 562	\$ 75	\$ 34.84	\$ 8.15	\$ 52.70	\$170.69	\$ 391.31
M	4	597	42	37.01	8.66	54.25	141.92	455.08
S	1	553	73	34.29	8.02	51.95	167.26	385.74
M	3	584	48	36.21	8.47	53.20	145.88	438.12
		2296	238	142.35	33.30	212.10	625.75	1670.25

Sum of FIT, Social Security, Medicare and Other Deductions

Gross Pay - Total Deductions

The sum of these four numbers should equal the total deduction.

Total gross pay - total deductions



Be sure to check your work by totaling the columns.

In addition to withholding federal income taxes and to withholding and matching Social Security and Medicare deductions, employers are subject to unemployment taxes at both the federal and state levels. These taxes are designed to provide financial assistance to unemployed workers.

## Calculating Federal Unemployment Tax

**Unemployment**  
A federal tax to which employers contribute which

By law, all U.S. employers must participate in the joint federal-state unemployment program established by the **Federal Unemployment Tax Act (FUTA)**. Note that although unemployed workers receive the benefits, employers—not workers—pay all of this tax.



Remember, FUTA tax must be paid only on the first \$7000. Anything over \$7000 is not taxed under FUTA. Use this fact to solve the next problem.

**WORK THIS PROBLEM***The Question:*

Big Ben's Bolt Company is not part of any state unemployment program. Hardy Wear, a supervisor for the firm, made \$9250 in the first quarter of the year. What is the company's FUTA tax?

**✓ YOUR WORK***The Solution:*

$$\text{FUTA tax} = 6.2\% \times \$7000 = 0.062 \times \$7000 = \$434$$

At this time, \$434 is the maximum FUTA tax per employee.

Now, for a set of practice problems on calculating taxes, turn to Section Test 6.3.

# SECTION TEST 6.3 Taxes

The following problems test your understanding of Section 6.3, Federal Income Tax and FICA. Use the tables given in this chapter.

- A. The following is a weekly payroll sheet for the Bridges Construction Company. For each individual, calculate the FIT, Social Security deduction, Medicare deduction, total deductions, and net pay. Use the wage bracket method to calculate the FIT.

Mar. Stat.	No. Ex.	Gross Pay	FIT	Social Sec.	Medicare	Other Deduc.	Total Deduc.	Net Pay
M	3	\$492				\$42.20		
M	4	517				43.25		
		495				41.05		
S	0	531		50.62	7.70	43.40		
M	2	522				43.15		
S	1	543				43.35		
S	0	497				42.45		
M	2	532				43.95		
S	1	554				44.20		
M	5	502				43.70		

- B. The following is a semimonthly payroll sheet for the By the Byte Software House. For each individual, calculate the FIT, Social Security deduction, Medicare deduction, total deductions, and net pay. Use the percentage method to calculate the FIT.

Mar. Stat.	No. Ex.	Gross Pay	FIT	Social Sec.	Medicare	Other Deduc.	Total Deduc.	Net Pay
S	1	\$1455				\$ 92		
S	0	1425				89		
M	3	1512				98		
M	4	1557				105		
S	0	1207				...		

**C. Solve these problems.**

1. Abe Beame's monthly gross pay is \$3875. He is married with three exemptions. (a) What is his FIT using the percentage method? What are his (b) Social Security and (c) Medicare deductions?
  
2. Colleen Dewhurst's monthly gross pay is \$3920. She is married with four exemptions. (a) What is her FIT using the percentage method? What are her (b) Social Security and (c) Medicare deductions?
  
3. Enrico Fermi's semimonthly gross pay is \$1775. He is married with four exemptions. (a) What is his FIT using the percentage method? What are his (b) Social Security and (c) Medicare deductions?
  
4. George Harrison has a semimonthly gross pay of \$1850. He is married with two exemptions. (a) What is his FIT using the percentage method? What are his (b) Social Security and (c) Medicare deductions?
  
5. Jayne Kennedy has a biweekly gross pay of \$1825. She is married with three exemptions. (a) What is her FIT using the percentage method? What are her (b) Social Security and (c) Medicare deductions?
  
6. Lee Marvin's biweekly gross pay is \$2050. He is single and has one exemption. (a) What is his FIT using the percentage method? What are his (b) Social Security and (c) Medicare deductions?
  
7. Shirley Temple's weekly gross pay is \$1005. She is single with one exemption. (a) What is her FIT using the percentage method? What are her (b) Social Security and (c) Medicare deductions?

9. Charles Dickens's weekly gross pay is \$472. He is married with two exemptions. (a) What is his FIT using the wage bracket method? What are his (b) Social Security and (c) Medicare deductions?
10. Eileen Farrell's weekly gross pay is \$395. She is single with one exemption. (a) What is her FIT using the wage bracket method? What are her (b) Social Security and (c) Medicare deductions?

**D. Solve these problems.**

1. Bob's Beehive Burger is not required to participate in a state unemployment plan. If an employee earned \$6700 in the first quarter, what is the company's FUTA tax?
2. Mike is an employee of the Wild Child Recording Studio. He earned \$5900 in the first quarter. The studio is not required to participate in a state unemployment plan. What is the studio's FUTA tax on Mike?
3. Maria's Mannequins is not required to participate in a state unemployment plan. If an employee earned \$7500 in the first quarter, what is the company's FUTA tax?
4. Bitten earned \$8250 in the first quarter at the By the Byte Software House. By the Byte does not have to participate in a state unemployment plan. What is the company's FUTA tax on Bitten?
5. The Spitting Image employs a counter person who earned \$7980 in the first quarter. The firm does not have to participate in the state unemployment plan. What is the Spitting Image's FUTA tax on the counter person?
6. Pia earned \$9315 in the first quarter as manager of The Pizza Palace. The Pizza Palace is not required to participate in the state unemployment program. What does The Pizza Palace pay in FUTA tax on Pia?
7. The Zippy Delivery Service driver made \$8752 in the first quarter. The company is not



## Key Terms

commission

differential piecework

gross pay

hourly wages

overtime

piecework

salary

salary plus commission

sliding scale commission

straight commission

Federal income tax withholding

Federal Unemployment Tax Act (FUTA)

FICA (Federal Insurance Contributions Act)

## at a Glance

Topic	Key Point	Example
Computing salary payments	To find salary payments for periods of less than 1 year, divide annual salary by the number of such periods per year.	Annual salary: \$24,960 Weekly: $\frac{\$24,960}{52} = \$480$ Biweekly: $\frac{\$24,960}{26} = \$960$ Semimonthly: $\frac{\$24,960}{24} = \$1040$ Monthly: $\frac{\$24,960}{12} = \$2080$
Calculating hourly pay	Gross pay = no. hours $\times$ rate per hour	What is Jane's gross pay if she works 35 hours and earns \$6.50 per hour? Gross pay = $35 \times \$6.50$ $= \$227.50$
Calculating pay with overtime	Multiply regular rate by 40 to find regular pay; subtract 40 from hours worked to find overtime hours; multiply regular rate by 1.5 to find overtime rate and multiply this rate by overtime hours to find overtime pay; add regular and overtime pay together.	What is Tim's gross pay if he works 45 hours and earns \$6.50 per hour regularly? Regular pay = $40 \times \$6.50 = \$260$ Overtime hours = $45 - 40 = 5$ Overtime rate = $\$6.50 \times 1.5 = \$9.75$ Overtime pay = $5 \times \$9.75 = \$48.75$ Gross pay = $\$260 + \$48.75 = \$308.75$
Calculating piecework	Gross pay = no. pieces $\times$ rate per piece	What is Ann's gross pay if she earns \$2.30 per piece and makes 237 pieces? Gross pay = $\$2.30 \times 237 = \$545.10$
Calculating differential piecework	Multiply each number of pieces by the appropriate rate; add the results.	Ray earns \$2.90 per chair for the first 100 chairs he makes, \$3.10 for the next 50 chairs, and \$3.40 for each additional one. If he makes 162 chairs, what is his gross pay?

	Key Point	Example
single straight commission	Gross pay = rate $\times$ total sales	<p>What is May's gross pay if she earns a 6% commission on sales and has sales of \$4847.65?</p> $\begin{aligned} \text{Gross pay} &= 6\% \times \$4847.65 \\ &= 0.06 \times \$4847.65 \\ &= \$290.859 = \$290.86 \\ &\quad \text{rounded} \end{aligned}$
single sliding scale commissions	Multiply each level of sales reached by the appropriate rate; add the results.	<p>Lee earns commissions as follows: 7% up to \$8000; 7.5% from over \$8000 to \$10,000; 8.25% over \$10,000. What is Lee's gross pay on sales of \$10,846.29?</p> $\begin{array}{r} 0.07 \times \$8000 = \$560.00 \\ 0.075 \times \$2000 = 150.00 \\ 0.0825 \times 846.29 = \underline{69.82} \\ \hline \$779.82 \end{array}$
single salary plus commission	Calculate salary (see page 218); calculate commission (see page 232); add commission and salary together.	<p>Lou earns a salary of \$26,000 per year plus a 2% commission on total sales. What is Lou's gross pay for a week with \$6000 in sales?</p> $\begin{aligned} \text{Salary} &= \$26,000/52 = \$500 \\ \text{Commission} &= 0.02 \times \$6000 = \$120 \\ \text{Gross pay} &= \$500 + \$120 = \$620 \end{aligned}$
income tax withholding (percentage method, tax rates)	<p>Taxable wages = gross wages – (no. exemptions <math>\times</math> withholding allowance) per table in section 17.1</p> <p>Tax depends on Tables for Percentage Method of Withholding.</p>	<p>Use the percentage method to solve the previous problem.</p> $\begin{aligned} \text{Taxable wages} &= \$650 - (2 \times \$48.08) \\ &= \$553.84 \end{aligned}$ <p>Use table 1(b), Tax = 15% <math>\times</math> (\$553.84 – 123) = \$64.63</p>
99 rates)	<p>Social Security = 6.2% <math>\times</math> gross pay up to \$76,200</p> <p>Medicare = 1.45% <math>\times</math> gross pay</p> <p>FICA = Social Security + Medicare</p>	<p>What are the FICA deductions on the employee in the previous example?</p> $\begin{aligned} \text{Social Security} &= 6.2\% \times \$650 = \$40.30 \\ \text{Medicare} &= 1.45\% \times \$650 = \$9.43 \\ \text{FICA} &= \$40.30 + 9.43 = \$49.73 \end{aligned}$
99 rates)	FUTA = 6.2% $\times$ employee's gross pay up to \$7000 per quarter	Find the FUTA the employer must pay on the employee in the previous example.





Complete the following payroll sheet.

	Name	Pieces Completed					Total Pieces	Rate	Gross Pay
		M	T	W	T	F			
5.	Eberhart, Martin	52	50	49	51	51		\$1.95	
6.	Grumbein, Kenneth	54	55	56	55	53		1.82	
7.	Norman, Emma	49	48	48	49	48		1.85	
8.	Rounds, Rick	49	51	51	50	50		1.92	

Complete the following payroll sheet.

The Microwidget Company pays its employees on a piecework basis using the following schedule:

1–200 @ \$1.40 each  
 201–225 @ 1.48 each  
 226 and up @ 1.55 each

	Name	Microwidgets per Day					Total	Gross Wages
		M	T	W	T	F		
9.	Greg, Kristin	42	43	45	45	44		
10.	Milvo, Norm	38	39	40	42	39		
11.	Robertson, Richard	45	46	47	47	46		
12.	Taliaferro, Beatrice	46	46	45	46	46		

Complete the following monthly payroll sheet.

The Littleton Steel Company pays its salespeople a straight  $4\frac{1}{2}\%$  commission.

Complete the following weekly payroll sheet.

Wired for Sound pays its salespeople on the following weekly schedule:

- 2% on sales up to \$12,000
- 2½% on sales from over \$12,000 to \$15,000
- 3% on sales over \$15,000

	Name	Total Sales	Gross Pay
17.	Mobley, Sarah	\$14,855	
18.	Quinton, Sonja	16,738	
19.	Tapp, Jeffrey	11,952	
20.	White, Mark	17,023	

Complete the following weekly payroll sheet.

Maria's Mannequins pays its salespeople a weekly salary plus a 2½% commission on their sales.

	Name	Salary	Sales	Commission	Gross Pay
21.	Nevels, James	\$205	\$3752		
22.	Smith, Tammy	210	3985		
23.	Willis, Stephanie	195	3228		
24.	Young, Tammy	212	4176		

**B.**

- Cass Elliott's monthly gross pay is \$4025. She is married with two exemptions. (a) What is her FIT using the percentage method? What are her (b) Social Security and (c) Medicare deductions?
- Karen Carpenter's monthly gross pay is \$4175. She is married with four exemptions. (a) What is her FIT using the percentage method? What are her (b) Social Security and (c) Medicare deductions?

4. Jimi Hendrix has a semimonthly gross pay of \$1785. He is single with one exemption.  
(a) What is his FIT using the percentage method? What are his (b) Social Security and (c) Medicare deductions?
  
5. Kate's Delicacies is not required to participate in a state unemployment plan. If an employee earned \$6350 in the first quarter, what is the company's FUTA tax?
  
6. Mike, an employee of the Wild Child Recording Studio, earned \$6125 in the first quarter. The studio is not required to participate in the state unemployment plan. What is the studio's FUTA tax on Mike?
  
7. Maria's Mannequins is not required to participate in a state unemployment plan. If an employee earned \$8250 in the first quarter, what is the company's FUTA tax?

## CHAPTER 6: Payroll

### Section 6.1

- A. 1. \$1865      3. \$2650      5. \$272      7. \$876      9. \$3425      11. \$895
- B. 1. \$2600; \$1300; \$1200; \$600      9. \$3250; \$1625; \$1500; \$750  
 3. \$1820; \$910; \$840; \$420      11. \$4550; \$2275; \$2100; \$1050  
 5. \$2860; \$1430; \$1320; \$660      13. \$1430; \$715; \$660; \$330  
 7. \$3900; \$1950; \$1800; \$900      15. \$1950; \$975; \$900; \$450

C. 1.

Name	Hours					Total Hours	Rate per Hour	Gross Pay
	M	T	W	T	F			
1. Bender, Keith	8	8	8	8	8	40	\$ 8.12	\$ 324.80
2. Chao, I-Na	8	7	6	5	4	30	7.55	226.50
3. Greenwood, Robert	6	8	5	8	7	34	6.38	216.92
4. Luliak, John	7	8	8	8	7	38	9.83	373.54
5. Pitt, David	8	6	0	8	6	28	10.27	287.56
6. Rhine, Alan	8	0	8	0	8	24	9.42	226.08
7. Tanner, Christie	8	7	7	7	8	37	6.83	252.71
8. Vasquez, Jose	8	6	5	6	0	25	7.98	199.50
Total								\$2107.61

3.

Name	M	T	W	T	F	Total Hours	Regular Hours	Regular Rate	O.T. Hours	O.T. Rate	Regular Pay	O.T. Pay	Gross Pay
1. Cramer, Marvin	8	9	10	9	8	44	40	\$9.27	4	\$13.905	\$ 370.80	\$ 55.62	\$ 426.42
2. Etheredge, Hugh	8	8	9	9	9	43	40	9.45	3	14.175	378.00	42.53	420.53
3. Lampron, George	9	8	7	6	5	35	35	8.52	0	—	298.20	0	298.20
4. McCabe, Lowell	10	10	10	10	9	49	40	8.99	9	13.485	359.60	121.37	480.97
5. Ngvyen, Tri	9	9	10	7	9	44	40	7.82	4	11.73	312.80	46.92	359.72
6. Reed, Harold	9	8	9	8	9	43	40	7.95	3	11.925	318.00	35.78	353.78
7. Tivis, Jerome	8	9	8	9	8	42	40	8.25	2	12.375	330.00	24.75	354.75
8. Wood, Regena	9	8	7	9	10	43	40	9.77	3	14.655	390.80	43.97	434.77
Totals											\$2758.20	\$370.94	\$3129.14

**Section 6.2**

- A. 1. 191; \$429.75
- 3. 180; \$383.40
- 5. 174; \$344.52
- 7. 207; \$478.17

- B. 1. 258; \$403.10
- 3. 252; \$391.40
- 5. 306; \$496.70
- 7. 258; \$403.10

- C. 1. \$2295.65
- 3. \$4756.50
- 5. \$2982.70
- 7. \$3342.50

- D. 1. \$289.04
- 3. \$235.37
- 5. \$254.60
- 7. \$332.10

- E. 1. \$185.17; \$365.17
- 3. \$128.63; \$258.63
- 5. \$172.46; \$352.46
- 7. \$139.55; \$284.55

- F. 1. \$263.94

**Section 6.3**

- A. 1. \$34; \$30.50, \$7.13, \$113.83, \$378.17
- 3. \$58; \$30.07, \$7.03, \$137.05, \$347.95
- 5. \$46; \$32.36, \$7.57, \$129.08, \$392.92
- 7. \$69; \$30.81, \$7.21, \$149.47, \$347.53
- 9. \$73; \$34.35, \$8.03, \$159.58, \$394.42

- B. 1. \$228.00, \$90.21, \$21.10, \$431.31, \$1023.69
- 3. \$139.87, \$93.74, \$21.92, \$353.53, \$1158.47
- 5. \$240.93, \$86.61, \$20.26, \$440.80, \$956.20
- 7. \$104.57, \$92.07, \$21.53, \$312.17, \$1172.83
- 9. \$157.45, \$94.55, \$22.11, \$376.11, \$1148.89

- C. 1. (a) \$407.55 (b) \$240.25 (c) \$56.19
- 3. (a) \$163.70 (b) \$110.05 (c) \$25.74
- 5. (a) \$193.58 (b) \$113.15 (c) \$26.46
- 7. (a) \$198.56 (b) \$62.31 (c) \$14.57
- 9. (a) \$38.00 (b) \$29.26 (c) \$6.84

- D. 1. \$415.40
- 3. \$434
- 5. \$434
- 7. \$434

Self-Test 6

A.1.

Name	Hours					Total Hours	Regular Hours	Regular Rate	O.T. Hours	O.T. Rate	Regular Pay	O.T. Pay	Gross Pay
	M	T	W	T	F								
1. Burns, Tracy	8	9	9	9	9	44	40	\$7.26	4	\$10.89	\$ 290.40	\$ 43.56	\$ 333.96
2. Grower, Charles	9	8	9	8	8	42	40	7.65	2	11.475	306.00	22.95	328.95
3. Jeter, Sandra	9	8	9	8	7	41	40	8.17	1	12.255	326.80	12.26	339.06
4. Lee, Russell	9	8	9	7	4	37	37	7.92	0	—	293.04	0	293.04
5. Mandrell, Carolyn	9	9	9	9	10	46	40	7.75	6	11.625	310.00	69.75	379.75
6. Nguyen, Emmanuelle	9	8	9	7	9	42	40	8.09	2	12.135	323.60	24.27	347.87
7. Palmer, Johnny	9	9	9	9	9	45	40	7.93	5	11.895	317.20	59.48	376.68
8. Roberts, Linda	10	9	8	7	9	43	40	8.11	3	12.165	324.40	36.50	360.90
Totals											\$2491.44	\$268.77	\$2760.21

- 3. (a) \$2925; (b) \$1462.50; (c) \$1350; (d) \$675
- 5. 253; \$493.35
- 7. 242; \$447.70
- 9. 219; \$308.12
- 11. 231; \$326.30
- 13. \$3404.25
- 15. \$5692.50
- 17. \$311.38
- 19. \$239.04
- 21. \$93.80; \$298.80
- 23. \$80.70; \$275.70
- 25. (a) \$24 (b) \$26.23 (c) \$6.13
- 27. (a) \$48 (b) \$25.73 (c) \$6.02
- 29. (a) \$282.60 (b) \$102.30 (c) \$23.93
- 31. \$393.70

- B.1. (a) \$463.95 (b) \$249.55 (c) \$58.36
- 3. (a) \$282.60 (b) \$102.30 (c) \$23.93
- 5. \$393.70
- 7. \$434

CHAPTER 7: The Mathematics of Buying

Section 7.1

- A. 1. \$54; \$396
- 3. \$96.25; \$1278.75
- 5. \$66.24; \$669.71
- 7. \$44.44; \$801.95
- B. 1. \$403.56
- 3. \$2082.92
- 5. \$398.50
- 7. \$315.58