

1.4

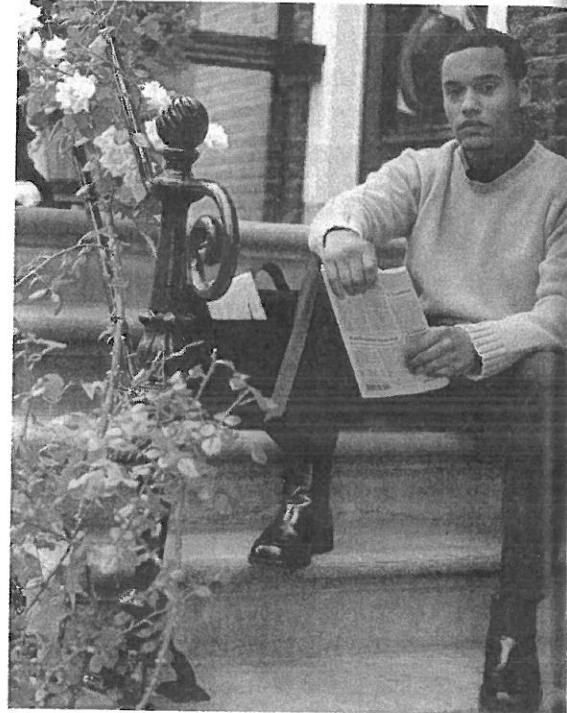
Commission

Goals

- Calculate straight commission earnings
- Calculate commission earnings based on quota
- Calculate graduated commission earnings
- Find the rate of commission

Start Up

Two sales jobs are advertised in the newspaper. The first job pays a commission of 3.5% on all sales, and sales usually average \$52,000 a month. The second job pays a commission of 4% on sales up to \$5,000 and 12% on sales over \$5,000, and sales usually average \$25,000 a month. Based on the usual monthly sales average, which job pays more?



Math Skill Builder

Review these math skills and solve the exercises that follow

- 1 Rewrite a percent as a decimal.
Rewrite this percent. $50\% = 0.5$
 - 1a. 12%
 - 1b. 18.6%
 - 1c. 2.5%
- 2 Find a percent of a number.
Find the percent. 1% of $\$1,956 = 0.01 \times \$1,956 = \$19.56$
 - 2a. 14% of \$500
 - 2b. 3.5% of \$1,200
- 3 Rewrite a decimal as a percent.
Rewrite this decimal. $0.25 = 25\%$
 - 3a. 0.08
 - 3b. 0.75
 - 3c. 0.01
 - 3d. 0.1825
- 4 Find what percent one number is of another number.
Find the percent. $\$10 \div \$80 = 0.125$ or 12.5%
 - 4a. $\$15 \div \75
 - 4b. $\$4,800 \div \$32,000$

■ Straight Commission

Some salespeople earn a commission instead of a fixed salary or hourly pay. A **commission** may be an amount for each item sold, or it may be a percent of the dollar value of sales. A higher commission may be earned for goods that are harder to sell than for goods that are easy to sell. Both a salary and a commission may be earned.

Salespeople whose earnings come only from commission work on a **straight commission** basis. When the rate of commission is an amount for each item sold, multiply the number of items by the rate to find the commission.

$$\text{Quantity Sold} \times \text{Rate of Commission} = \text{Commission}$$

EXAMPLE 1

Maxwell Lytle sells decorative notepads and is paid a straight commission of \$0.80 on each notepad he sells. During December, he sold 750 notepads. Find his commission.

SOLUTION

$$750 \times \$0.80 = \$600 \text{ commission}$$

■ CHECK YOUR UNDERSTANDING

- A. Lorraine Wilk is paid a commission of \$1.30 for each hand-painted tile she sells. What commission did she earn by selling 74 tiles last week?
- B. Leo Margolis receives a \$0.075 commission for each newspaper he sells at his newsstand. What commission would he earn by selling 1,200 newspapers?

When the rate of commission is a percent, multiply the amount of the sales by the rate to find the commission.

$$\text{Sales} \times \text{Rate of Commission} = \text{Commission}$$



EXAMPLE 2

Huey Gaines is paid a straight commission of 6% on his sales. During February, his sales were \$38,000. What was his commission?

SOLUTION

$$\$38,000 \times 0.06 = \$2,280 \text{ commission}$$

■ CHECK YOUR UNDERSTANDING

- C. Melvin's sales last month of a new tile cleaner were \$9,500. If he receives a commission rate of 15% of all sales, what commission did he earn?
- D. Jacqueline earns 15% commission on sales. Her sales for three months were: \$2,870, \$3,150, and \$3,940. What was her total commission for the three months?

■ Commission Based on Quota

Some salespersons may be paid a commission that is a percent of their sales above a certain amount. This fixed amount is called a **quota**. Salespersons may also be paid a salary in addition to commission.

EXAMPLE 3

Leona Bahr is paid a commission of 12% on all sales above \$7,000 for the week. She is also paid a weekly salary of \$380. What are her total earnings for a week in which her sales were \$9,800?

SOLUTION

Sales	\$9,800	Salary	\$380
Quota	<u>-7,000</u>	Commission	<u>+336</u>
Sales over Quota	\$2,800	Total Earnings	\$716

Commission: 12% of \$2,800 = \$336

Leona's total earnings were \$716

■ CHECK YOUR UNDERSTANDING

- E. Colby Richards is paid a salary of \$125 a week and a 3% commission on all sales he makes above \$2,000 for the week. What total earnings did he have for a week in which his sales were \$2,890?
- F. Lula Krobo is paid a 7% commission on all sales over \$15,000 in a month and a monthly salary of \$2,300. Her last month's sales were \$29,700. What were Lula's total earnings for the month?

■ Graduated Commission

Some salespersons are paid a **graduated commission**. This means their rate of commission increases as their sales increase. For example, the rate may be 3% on the first \$12,000 of sales; 4% on the next \$6,000; and 5% on sales over \$18,000. Graduated commissions may also be based on the number of units sold.

EXAMPLE 4

Lamont Cotton is paid 4% commission on the first \$10,000 of monthly sales and 10% on all sales over \$10,000. Last month his sales were \$38,000. What was his commission?

SOLUTION

Commission on first \$10,000: $\$10,000 \times 0.04 = \400

Sales over \$10,000: $\$38,000 - \$10,000 = \$28,000$

Commission on sales over \$10,000: $\$28,000 \times 0.10 = \$2,800$

Total commission: $\$400 + \$2,800 = \$3,200$

■ CHECK YOUR UNDERSTANDING

- G. Morgan Lee is paid a commission of 3% on the first \$100,000 of monthly sales and 5% on any sales above that amount. What commission did he earn if his sales for a month were \$120,000?
- H. Janice Corrado is paid a commission of 15% of her yearly sales up to \$85,000 and 18% of any sales above \$85,000. Her total sales for last year were \$112,000. What total commission did she earn last year?

■ Rate of Commission on Sales

To find the rate of commission, divide the amount of commission paid on total sales by the total sales amount.

$$\text{Rate of Commission} = \text{Amount of Commission} \div \text{Sales}$$

EXAMPLE 5

A salesperson sold a laptop computer and software for \$3,000 and received a \$120 commission. What percent commission did the salesperson receive?

SOLUTION

$$\$120 \div \$3,000 = 0.04 = 4\%$$

CALCULATOR TIP

If your calculator has a % key, you can find the percent directly by following these steps: key 120, press \div , key 3000, press %. Be sure to add the percent symbol to your answer.

■ CHECK YOUR UNDERSTANDING

- I. Marc received a commission of \$448 for selling \$6,400 in goods in the past two weeks. What rate of commission did he earn?
- J. Nedra's sales last month were \$54,000 for which she received a commission of \$3,240. What rate of commission was Nedra paid?

Wrap Up

The first sales job would pay monthly commission of \$1,820. The second job would pay commission of \$200 on the first \$5,000 of sales and \$2,400 on the \$20,000 of sales over \$5,000 in a month. Total monthly commission for the second job would be \$2,600. The second sales job pays more.

COMMUNICATION

A company is considering changing the way in which it pays its sales staff. The company now pays a straight commission of 15% of all monthly sales. Sales now average \$24,000 a month per salesperson.

The company wants to switch to a plan that pays a monthly salary of \$1,500 and a 22% commission on all sales over \$15,000 a month. Team up with another student to figure what would be the increase or decrease in the annual wages of salespeople by using the new plan compared to the old plan. Write your answer in sentence form.

EXERCISES

Rewrite as a decimal.

1. 9.25% 2. 16.2% 3. 0.5%

Find the amount.

4. 12% of \$800 5. 7.5% of \$13,000 6. 4.2% of \$569

Find the percent.

7. $\$1.26 \div \7 8. $\$1.20 \div \8 9. $\$90 \div \$2,000$

Rewrite as a percent.

10. 0.08 11. 0.11625 12. 0.0025

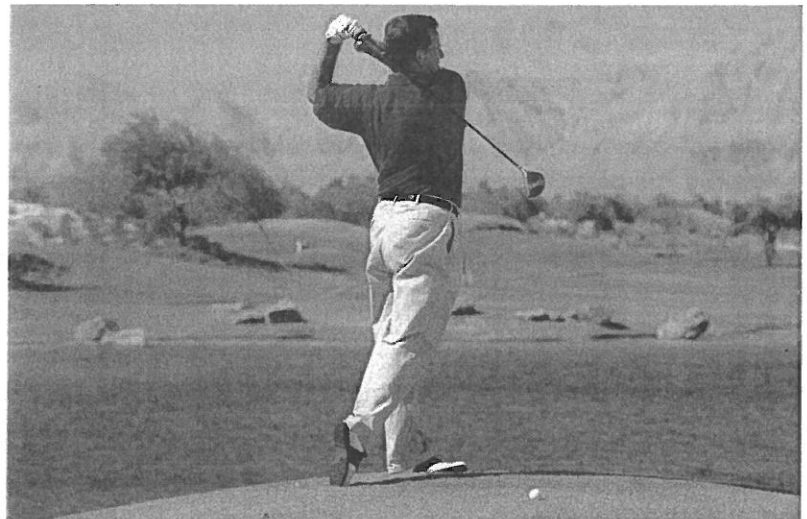
13. Dan Pawlik is paid a straight commission of \$5.75 for each item he sells. Last month he sold 103 items. Find his estimated and exact commissions.
14. A student who sells subscriptions for a magazine that costs \$35 a year makes a commission of \$5.25 on each subscription. What percent commission does the student make?
15. Paul Batik earns a commission of 9% on sales. Last week he had sales of \$646.70, \$237.58, \$1,984.89, \$658.66, and \$953.73. Find his total commission to the nearest cent.
16. Jo Ann White is paid a salary of \$410 a week and a commission of 5.6% on all sales. Her sales last week were \$6,700. Find her total earnings for the week.
17. Sheldon Cole earns a salary of \$150 a week and a commission of 7% on all sales. If Cole's sales for one week were \$6,890, what were his total weekly earnings?
18. Roosevelt Quinn receives a weekly salary of \$600 plus $\frac{1}{2}\%$ commission on all sales in excess of \$12,500 a week. Last week his sales were \$48,370. What were his total earnings for the week?
19. Alice Miller works for a paint manufacturer. She is paid 3% commission on her first \$20,000 of monthly sales and 8% commission on all sales over \$20,000. In March her sales were \$54,500; in April, her sales totaled \$47,300. What were the total commissions she earned for the 2 months?
20. Olivia Thoms sells surplus books to bookstores. She is paid a weekly commission of \$1.50 each on the first 50 books she sells, \$1.75 each on the next 100 books, and \$2 on any books she sells over 150. Last week she sold 225 books. What was her commission for the week?
21. Ludmilla Pavel is paid a commission on all sales over \$3,000 a week. Last week she earned a commission of \$420 on sales of \$16,000. What rate of commission was she paid to the nearest tenth percent?

Martin Ellis sells a line of cooking pots. He is paid a salary of \$1,150 a month plus a commission on all sales. Each month his employer pays \$120 of the cost of a health insurance plan. Last month his sales were \$35,000, and he earned a total salary and commission of \$3,250.

22. How much commission was Martin paid?
23. What rate of commission was he paid?
24. **CRITICAL THINKING** When a new inkjet printer model is introduced salespeople may be paid a larger commission by their store for each old printer model they sell. Why would the store's manager offer such an incentive to salespeople?
25. **CRITICAL THINKING** Write two paragraphs that explain the advantages and disadvantages of working on commission. The first paragraph should be from an employee's viewpoint, the second from the viewpoint of an employer.
26. **DECISION MAKING** You see ads on an Internet job listing service from two companies looking for salespeople. Both companies market a weight-loss system. The Slo-Loss Company pays a weekly salary of \$100 and a commission of 14.5% on sales. The Slim-Now Company pays a straight commission of 30% of sales. Both companies expect you to be able to have sales of \$1,000 in the first month and reach sales of \$5,000 at the end of six months. List the reasons in outline form why you want to get one job over the other.

MIXED REVIEW

27. Find $\frac{1}{4}\%$ of \$28,000
28. $\$97,398 \times 1\%$
29. 60 is 15% of what number?
30. 20% more than \$18 is what amount?
31. \$250 decreased by what percent of itself is \$235?
32. Marc Bullard has two part-time jobs. At one job he worked 12 hours last week and was paid \$8.15 an hour. Marc worked 6.25 hours last week at his second job that pays \$7 an hour. What was his gross pay last week from both jobs?
33. Nola Potter earns a salary of \$1,200 a month and a commission of 7.5% on all sales over \$4,000. This month her sales were \$21,400. Find her total earnings for the month.
34. Carolyn Mills does maintenance work at a golf course. She earned these amounts last season: April, \$1,505; in each of the next four months, \$1,806; September, \$901. What were her average earnings per month for these 6 months?



1.5

Other Wage Plans

GOALS

- Calculate gross pay for piece-rate employees
- Calculate gross pay for per diem employees
- Calculate gross pay for tip employees

Start Up

Employees, such as food service staff, whose pay varies widely, may need to estimate or project annual gross income based on current earnings. Assume that a waiter's monthly earnings from hourly wages and tips for the first quarter of the year are as follows: January, \$1,367; February, \$1,845; March, \$2,398. What is the projected annual gross income for the waiter based on the first quarter's earnings?



Math Skill Builder

Review these math skills and solve the exercises that follow.

- ① **Add** whole numbers and money amounts.

Find the sum. $34 + 25 + 31 + 37 + 28 = 155$

1a. $78 + 92 + 101 + 86$

1b. $\$135 + \$176 + \$157$

- ② **Multiply** money amounts by whole numbers.

Find the product. $347 \times \$0.81 = \281.07

2a. $181 \times \$1.24$

2b. $5 \times \$98$

- ③ **Multiply** money amounts by percents.

Find the product. $15\% \times \$54 = 0.15 \times \$54 = \$8.10$

3a. $20\% \times \$26$

3b. $5\% \text{ of } \$20.45$

3c. $10\% \text{ of } \$60$

■ Piece-Rate Employees

Employers use a variety of ways to pay their employees. Some employees are paid for each item or *piece* they produce. Their wages are paid on a piece-rate basis. To figure their gross pay, you must multiply their pay per piece by the number of pieces produced. If employees are paid only for usable pieces produced, they get no pay for the pieces that are rejected.

$$\text{Number of Pieces Produced} \times \text{Piece Rate} = \text{Gross Pay}$$

EXAMPLE 1

Helen Burchett is paid \$1.30 for each usable picture frame she produces. What was Helen's gross pay for last week if she produced the following quantities of usable frames:

Monday	52
Tuesday	47
Wednesday	54
Thursday	50
Friday	45

SOLUTION

$$52 + 47 + 54 + 50 + 45 = 248 \quad \text{usable frames produced}$$

$$248 \times \$1.30 = \$322.40 \quad \text{gross pay}$$

■ CHECK YOUR UNDERSTANDING

- A. Louise Schubert is paid \$18 for each computer she installs at customer offices. She installed these numbers of computers in 5 days last week: 7, 6, 9, 8, 5. What gross pay did Louise earn for the week?
- B. Trevor Sherr is paid \$1.20 for each hand-painted dish he produces. He is not paid for dishes that are not acceptable. On Monday, he painted 56 dishes; on Tuesday, he painted 44 dishes. For the two days 6 dishes contained slight errors and were unacceptable. What gross pay did Trevor earn for the two days?



■ Per Diem Employees

Some people are paid on a per diem basis. *Per diem* means "by the day." Per diem employees are paid a fixed daily amount by their employer. Many per diem employees are temporary employees provided to a company by temporary help agencies.

Self-employed persons may charge a per diem rate for their services. These people may provide a specialized service to their clients. Self-employed persons work for themselves instead of for employers.

The gross pay of someone paid by the day is found by multiplying the per diem rate by the number of days worked.

$$\text{Per Diem Rate} \times \text{Number Of Days} = \text{Gross Pay}$$

EXAMPLE 2

Shawn Traylor worked 5 days last week as a temporary computer operator. His per diem pay rate was \$120. What gross pay was Shawn paid for the week?

SOLUTION

$$5 \times \$120 = \$600 \quad \text{gross pay for the week}$$

■ CHECK YOUR UNDERSTANDING

- C. Sherry McCoy is a tax consultant. She charges \$425 per diem for her services. If she worked 180 days last year, what was her gross income for the year?
- D. Charlie's neighbors are often out of town and they hire him to house-sit. They pay Charlie \$20 for each day they are gone. If they were out of town 57 days last year, what was Charlie's income from house sitting?

■ Tip Employees

Many workers receive income in the form of tips. A **tip** is an amount of money given to someone for services they provide. The person receiving the service pays tips voluntarily.

A tip, also called a *gratuity*, is often calculated as a percentage when there is a dollar value attached to the service. A waiter, for example, may receive a tip of 15% of the total restaurant bill.

$$\text{Tip Percent} \times \text{Total Bill} = \text{Tip Amount}$$

An airport skycap on the other hand, may receive a specific amount for each piece of luggage handled.

$$\text{Tip Per Unit} \times \text{Number of Units} = \text{Tip Amount}$$

Tipping practices vary considerably. The table below suggests guidelines for tipping certain types of workers. Most people round tips to the nearest quarter, or even dollar amount.

	Suggested Tipping Amounts
Airport skycap	\$1 per bag
Hair stylist	15% of cost, minimum \$1
Hotel chambermaid	\$5 to \$9 a night
Pizza delivery person	\$1 to \$5 depending on distance
Waiter/waitress	15-20% of total bill
Buffet waitstaff	5-10% of total bill
Taxi driver	15% of fare

EXAMPLE 3

After the Sutton family finished their meal at a local restaurant, the waiter brought them a check for \$46.86. If Mrs. Sutton leaves a 20% tip, what amount of tip wages will the waiter receive for serving dinner to the Suttons? What will be the total meal cost to the Sutton's?



SOLUTION

The check amount is multiplied by the tip percentage to find the amount of the tip. The tip is added to the check amount to find the meal's total cost.

$$20\% \times \$46.86 = 0.2 \times \$46.86 = \$9.372 \quad \text{round tip to } \$9.50$$

$$\$9.50 + \$46.86 = \$56.36 \quad \text{total meal cost}$$

■ CHECK FOR UNDERSTANDING

E. Jack orders the lunch special and a beverage. His check comes to \$10.20.

- 1) How much will the waitress receive if a 15% tip is left?
- 2) What is the total cost of the meal to Jack?

F. Lydia and Sarah share a cab ride to work. Their fare is \$7.60.

- 1) At 15%, how much should they tip the driver?
- 2) What is their total cost to ride the cab?

Wrap Up

A waiter's total earnings for the first 3 months, or one quarter year, are \$5,610. Since there are 4 quarters in a year, multiply the total earnings for three months by 4 to find the total gross income for the year. So, $\$5,610 \times 4 = \$22,440$ total annual gross income.

Algebra Connection

Write the formula an employer uses to calculate a piece-rate gross pay where n represents the number of completed units, r represents the pay rate per unit, and G represents gross pay. Use the formula to find gross pay for 415 envelopes stuffed at a rate of \$0.20 each.

The formula may also be used to find the gross pay for per diem employees. Test the formula by finding gross pay for a food demonstrator who works 4 days a month at a rate of \$65 a day.

EXERCISES

Find the sum.

1. $40 + 38 + 39 + 45 + 41$
2. $\$135 + \18.60

Find the product.

3. $87 \times \$1.12$
4. $3 \times \$97$
5. $15 \times \$3 \times 5$

Find the product.

6. $5\% \times \$38$
7. $20\% \times \$187$
8. $\$425 \times 22$

9. An airport skycap handled 520 bags in a weekend. His average tip per bag was \$1.25. What total earnings did he have from tips for the weekend?
10. A waitress in an exclusive restaurant presented a food and beverage check in the amount of \$340 to customers at a table. The customers decided to leave a 20% tip. What tip amount did the waitress receive?
11. Sandra Mitchell worked 22 days last month as a temporary employee in the Purchasing department. Her per diem pay was \$95. What were Sandra's total earnings for the month?
12. To meet a shortage of medical staff, a doctor agreed to work 6, 24-hour shifts in the emergency room of a hospital during the next year. She is paid \$950 for each shift worked. What total pay will the doctor receive for the 6 days of emergency room work?
13. Lu Ying works at the Wilkins Bike Shop and is paid \$3.25 for every bike he assembles. The shop owner charges customers \$20 for this service. During the five working days of one week, Lu assembled these numbers of bikes: 27, 33, 29, 27, 31. What was Lu's gross pay for that week?



For each of these piece-rate employees at Dover Industries, find the total pieces produced and the gross pay for the week. Copy and complete the chart.

	Name	M	T	W	T	F	Total pieces	Rate per piece	Gross Pay
14.	Zinke, T	54	55	59	62	60		\$1.60	
15.	Bello, V.	24	28	30	31	27		\$2.80	
16.	Dixon, S.	63	69	59	62	50		\$1.55	
17.	Maier, B.	68	65	72	74	75		\$1.18	

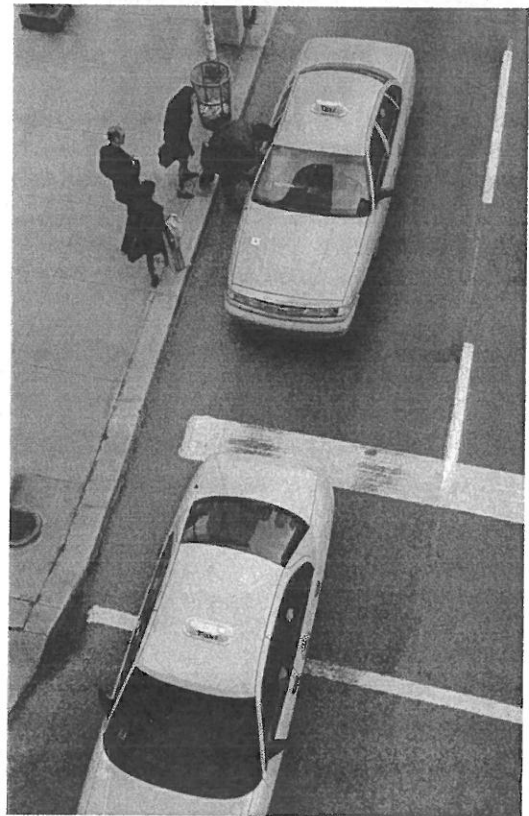
18. **DECISION MAKING** You and your partners are just starting a business. Since you are the manager, the partners are letting you decide whether to hire only regular, full-time employees or per diem employees who will work full time. Your other business partners told you that it may be less expensive for the first year of operation to hire per diem employees. You have to explain your decision to your partners. What will you tell them about your decision?

19. **CRITICAL THINKING** Steve took a taxi from the airport to his hotel across town. The fare came to \$19.30. Steve handed the driver a \$20 bill and told him to keep the change. Do you think Steve gave the driver a generous tip, an adequate tip, or not enough tip to express his appreciation for good service?

INTEGRATING YOUR KNOWLEDGE Fred must make a decision about keeping his current job, which he dislikes, or accepting an offer for a new job, which he thinks he would enjoy. His current job pays an hourly rate of \$12. Fred works 40 hours a week.

At the new job, Fred would earn \$0.80 for each item he produces up to 125 pieces per day. For each piece over 125 produced in a day, Fred would receive \$0.85. The average production rate is 15 pieces an hour. Because of his experience and skill, Fred believes that he can produce 18 an hour. At the new job, Fred would work 8 hours a day, 5 days a week.

20. What is the average weekly pay received by employees at the new job?
21. How much does Fred expect to make each week at the new job?
22. What is Fred's weekly pay at his current job?
23. Create a chart, like the one shown, that will allow you to compare both jobs by estimated daily, weekly, and annual earnings based on Fred's predictions that he will produce 18 pieces an hour.



	Current Job	New Job
Daily Earnings		
Weekly Earnings		
Annual Earnings		

MIXED REVIEW

24. $1\frac{5}{8} + 2\frac{3}{4}$ 25. $15 \div \frac{5}{8}$
26. What number increased by 8% of itself equals 1,944?
27. Bob Turnquist works 42 hours a week at a pay rate of \$12.50 an hour. What amount will Bob earn in 4 weeks?

Brenda Peoples earned \$43,680 last year. Her usual work schedule is 50 hours a week. What were her average earnings

28. per month? 29. per week? 30. per hour?
31. Danny Mills receives a salary of \$660 a month and a 7.5% commission on all sales above his monthly sales quota of \$15,000. His sales for February totaled \$32,000. What was Danny's total income for February?
32. A waitress at a Sunday brunch served 50 customers in a 4-hour period. The total of all the food and beverage checks she wrote for customers was \$1,500. Her customers left an average tip of 8%. What is her tip income for Sunday?

Technology Workshop

Task 1: Enter Data Into A Payroll Detail Template

You are to complete a template that calculates the weekly gross wages for each employee of the Bainbridge Company. All employees receive regular hourly pay for time worked and overtime pay for hours worked beyond 40 hours in a week.

Open the spreadsheet for Chapter 1 (tech1-1.xls). Next, enter into the spreadsheet the hours worked by each employee for the three days shown in blue cells (cells G5-I14). The spreadsheet will calculate regular, overtime, and total gross wages for each employee. When finished, your spreadsheet should look like the one shown below.

	A	B	C	D	E	F	G	H	I	J	K	M	N	O	P	
1	Bainbridge Company															
2	Payroll Detail Sheet for January 8, 20—															
3	Employee No.	Name	Daily Hours Worked							Total Hours		Hourly Rate	Gross Wages			
M			T	W	T	F	S	S	Reg	O.T.	Reg		O.T.	Total		
4																
5	1	Ajanaku	8.00	8.00	7.80	8.00	8.00	0.00	0.00	39.80	0.00	10.46	416.31	0.00	416.31	
6	2	Bell	8.00	8.00	4.50	8.00	8.00	0.00	0.00	36.50	0.00	11.15	406.98	0.00	406.98	
7	3	Cole	8.00	10.00	10.00	10.00	8.10	0.00	0.00	40.00	6.10	12.23	489.20	111.90	601.10	
8	4	Dern	7.70	8.00	8.00	8.00	8.00	4.10	2.00	40.00	5.80	10.15	406.00	88.31	494.31	
9	5	Evers	8.00	9.80	8.10	8.00	8.00	0.00	0.00	40.00	1.90	12.85	514.00	36.62	550.62	
10	6	Ford	7.10	8.00	8.00	8.00	8.00	4.10	0.00	40.00	3.20	10.46	418.40	50.21	468.61	
11	7	Gomez	8.00	8.00	8.00	8.00	8.00	3.90	2.00	40.00	5.90	12.35	494.00	109.30	603.30	
12	8	Huang	8.00	9.30	8.00	8.00	8.00	0.00	0.00	40.00	1.30	11.70	468.00	22.81	490.82	
13	9	Isom	8.00	8.00	5.40	8.00	8.00	0.00	0.00	37.40	0.00	11.32	423.37	0.00	423.37	
14	10	Jackson	8.00	8.00	10.00	8.10	8.40	0.00	0.00	40.00	2.50	13.20	528.00	49.50	577.50	
15		Totals											4,564.25	468.65	5,032.90	
16																
17												Pay Raise Factor	1.000			

Task 2: Analyze the Spreadsheet Output

Answer these questions about your completed payroll sheet.

1. What hourly pay rate did Dern have?
2. Which employee had the largest gross pay for the week?
3. Which employee worked the least regular-time hours?
4. Which employee worked the most overtime hours?
5. What was the total amount paid to all employees for overtime work?
6. What total gross pay was paid to employees for the one-week pay period?

Now move the cursor to cell M17, labeled Pay Raise Factor. The current entry in the cell should be 1.000. Now enter the 1.021. This change shows what would happen if the Bainbridge Company gives its employees a 2.1% pay increase. The increase would raise wages to 102.1%, or 1.021, of their current level. Notice how the hourly rate and the regular, overtime, and total gross wages figures changed for all workers.

Answer these questions about your updated payroll sheet.

7. What is the formula used in Cell N5? What does the formula calculate?
8. What is the formula used in Cell O7? What arithmetic is done in the cell?
9. What is the formula used in Cell P12? What does it do?
10. What hourly rate does Dern now earn? How much more per hour is Dern paid after the raise was calculated?
11. Find the difference between the original and the new total gross wages, then calculate the percent increase to the nearest tenth percent. What does your answer show?

Task 3: Design a Sales Commission Spreadsheet

You are to design a spreadsheet that will compute the monthly earnings of salespersons that are paid monthly on a graduated commission basis.

The spreadsheet for Task 1 includes formulas that use subtraction, multiplication, the IF function, and the SUM function. Create a spreadsheet that will use similar math operators and functions. The spreadsheet should allow you to calculate the gross pay for a month for all employees listed. Your spreadsheet should contain a row for each employee. The column formulas should calculate the amount of commission earned by each employee for each commission level and the total gross wages for all employees.

SITUATION: You are the payroll clerk in the office of the Betadyne Company. The company pays its salespeople a commission on their sales. It does not pay them any salary. The employee names and their April sales are shown below on the left. Shown below on the right are the sales levels and rates by which your company figures commission payments.

Salesperson	April Sales
Boyce, Thad	\$53,000
Elkins, James	\$48,000
Kubik, Lucy	\$92,000
Mays, Nora	\$64,000

Betadyne Company Commission Structure
1.5% on all sales
3.4% of the first \$50,000 of sales
4.6% of all sales above \$50,000

Task 4: Analyze the Spreadsheet Output

Answer these questions about your completed spreadsheet.

12. How did you figure the commission on all sales?
13. How did you test the spreadsheet to make sure the calculations were correct?
14. How would you change the spreadsheet to calculate the average gross commissions earned by employees?

Chapter Assessment

RATE YOUR KNOWLEDGE on a scale of 1–10
(10 being the highest) about

- gross pay
- overtime pay
- earning wages based on commission

What information and skills did you acquire that caused your self-rating to change?

WRITE

Suppose that you live in Chicago, Illinois and interview for both of the jobs described in the classified advertisements shown below. Both companies are strong financially with equal growth potential and each offers you the job. Explain and show the computations that you need to make in order to decide which company is the best choice for you.

CAREGIVERS—\$100 signing bonus! Full-time work with individuals that have special medical needs. Travel to patients' homes. Annual salary range: \$32–\$38K depending on experience. Excellent benefits. For more information, please call 555-700-8000.

MEDICAL ASSISTANT needed for busy doctor's office. Seeking high-energy person to work full-time to assist with patients. Must have previous experience. Hourly-rate is \$16.85 with the possibility of overtime. Please fax resume to 555-700-1111, attn: Kim.

SCANS

Workplace Skills—Acquiring and Evaluating Information

These skills include the ability to see when information is needed, to gather information from a variety of sources, and to evaluate the usefulness of the information.

Test Your Skills Identify three jobs or industries that interest you. Look at a variety of resources such as job ads, the Internet, professional journals, library materials or direct contact with companies. Determine job titles. Name potential employers. List the skills each job requires. Mark each skill with either 1 (have the skill) or 2 (need to develop the skill).

Make a Plan From your three jobs or industries, choose the one that interests you the most. Create a plan that includes short-term goals and long-term goals to prepare you for a career in your chosen field.

Summarize Prepare in writing a speech that you could give that would influence an employer to hire you. Include references to your abilities in any of the following mathematical skills and how they apply to your ability to do this job.

multiplication
grouping data

division
calculating pay

estimation
using spreadsheets

rounding
writing formulas