


**Lesson  
29**
**Sales Tax and Income Tax**

**7.13(A)** Calculate the sales tax for a given purchase and calculate income tax for earned wages.

**Understand the TEKS**

When you buy something, you often pay more than the amount on the price tag. That is because an additional amount called **sales tax** is added to the price. Sales tax is collected by local and state governments. The amount is a **percent** of the price and it varies from one location to another.

Suppose you buy a soccer ball that costs \$18, and the sales tax rate where you live is 7%. So the total amount you pay is \$18 plus 7% of \$18. To find a percent of an amount, rewrite the percent as a decimal. Then multiply by the amount. To write a percent as a decimal, move the decimal point two places to the left. So 7% as a decimal is 0.07.

$$\$18 + 0.07(\$18) = \$18 + \$1.26 = \$19.26$$

So you pay a total of \$19.26 for the soccer ball.

There is another way that you can find the total. If you pay 7% tax, you pay 100% of the price, plus 7% of the price. This means you are paying 107% of the price. So you can multiply 18 by 1.07 to get \$19.26.

Not only do you pay more than the price when you buy something because of sales tax. You also get less than you earn when you work because of **income tax**. Income is the amount of money a person earns. One way a person earns money is by working at a job. Income tax is an amount collected by the government from any money a person earns. It is a percent based on the amount earned. Income tax is also affected by how many **dependents** a person has. A dependent is someone who depends on someone else for financial support. Children are dependents of their parents.

Suppose Jason earns \$34,000 per year working in a grocery store. Further suppose that his income tax rate is 15%. That means that 15% of \$34,000 is subtracted from Jason's income. To find out how much that is, rewrite the percent as a decimal. Then multiply it by the income to find the amount of income tax. Subtract the income tax from his earnings to find the amount left over for Jason to spend or save.

$$\$34,000 - 0.15(\$34,000) = \$34,000 - \$5,100 = \$28,900$$

There is another way to find how much he has left after taxes. Since his income tax rate is 15%, he earns 100% of his earnings minus 15% of his earnings. This means he earns 100% - 15%, or 85%, of his earnings. Therefore, you can multiply \$34,000 by 0.85 to get \$28,900.

Jason has \$28,900 left after income taxes. This amount is often called the take-home pay or **net income**. The income before taxes are subtracted is known as **gross income**.

Income taxes are officially due on April 15 each year. They are paid to a government organization known as the Internal Revenue Service, or IRS. In addition to income tax paid to the federal government, many state and local governments also collect tax. Rather than paying all at once, people can have small amounts taken out of each paycheck throughout the year.

The government uses money collected through sales tax and income tax to pay for the services it provides. For example, some money might be used to build roadways or bridges. It might pay to make parks and playgrounds. Some money might be used to make loans to college students, research new medicines, or give food to people who cannot afford it. Money may also be used to maintain police and fire departments, as well as some hospitals.

**Words to Know**

sales tax  
percent  
income tax  
dependent  
net income  
gross income



## Guided Instruction

### Problem 1

Daniel buys a new video game for \$48.50, a manual for the game for \$19.95, and a poster for \$5.00. Sales tax where he lives is 6.5%. What is the total cost of Daniel's purchase? Find the answer two ways.

**Step 1** Find the total cost of the items before sales tax.

$$\$48.50 + \$19.95 + \$5.00 = \$\underline{\hspace{2cm}}$$

**Step 2** Find the amount of sales tax.

Write 6.5% as a decimal.  $\underline{\hspace{2cm}}$

Multiply the decimal by the total cost. Round the amount to the nearest cent.

$$0.065(\$73.45) = \$\underline{\hspace{2cm}}$$

**Step 3** Add the sales tax to the total cost.

$$\$73.45 + \$4.77 = \$\underline{\hspace{2cm}}$$

**Step 4** Find the total cost in one step.

$$\$73.45(\underline{\hspace{2cm}}) = \$78.22$$

### Solution

What is the total cost of Daniel's purchase? \$  $\underline{\hspace{2cm}}$

### Problem 2

Carla gets paid \$3,550 every two weeks. Her income tax rate is 28%. How much income tax does Carla pay for one year? How much does Carla have left over to spend or save?

**Step 1** Find the total amount Carla earns in one year.

Carla gets \$3,550 every 2 weeks. There are 52 weeks in a year, so Carla gets paid 26 times.

$$\$3,550 \times 26 = \$\underline{\hspace{2cm}}$$

**Step 2** Find the amount of income tax.

Write 28% as a decimal.  $\underline{\hspace{2cm}}$

Multiply the decimal by the total earnings.

$$0.28(\$92,300) = \$\underline{\hspace{2cm}}$$

**Step 3** Subtract the income tax from the earnings.

$$\$92,300 - \$25,844 = \$\underline{\hspace{2cm}}$$

How are sales tax and income tax similar, and how are they different?

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**Solution**

How much income tax does Carla pay for one year? \$\_\_\_\_\_

How much does Carla have left over to spend or save? \$\_\_\_\_\_

**Another Example**

Fred earns an income of \$4,200, and must pay 23% in taxes. Why can he use the expression  $0.77(4,200)$  to find his net income?

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**Other Example**

Suppose you buy a DVD player and two DVDs.

Item	Cost
DVD player	\$30
DVD	\$15

You must pay 5% sales tax. Estimate the total cost, including tax. Explain how you found your answer.

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## Critical Thinking

Solve each problem.



Discuss

1. Employees can have some income that is not taxable. For example, an amount an employee pays for health insurance may not be taxable. Suppose an employee earns \$35,000 per year. The cost of insurance is \$4,500. Compare the employee's taxable income with the total income. Explain how this difference affects the amount of income taxes the employee pays. Share your answer with a partner. Compare your answers. Make sure your answers are complete and correct.

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Elevate

2. Sue wants to buy a car. The table shows the costs of two cars.

<b>Car A</b>	\$12,500
<b>Car B</b>	\$18,200

Sue will pay a 7% sales tax. What is the total difference in cost between the two cars, with and without sales tax? Explain.

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Real World Connection

3. Leo saved \$28. He wants to buy a model train that costs \$25.99. If the sales tax is 8.2%, does Leo have enough money to buy the model train? Support your answer with evidence.

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Financial Literacy

4. Suppose you know the price of an item and the total cost with sales tax. How could you use this information to determine the rate of sales tax?

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Collaborative Learning

5. Work with a partner. Choose two to three items from a newspaper advertisement. Use the sales tax where you live to calculate the total cost of the items with tax.



## ★ Practice

**DIRECTIONS** Read each question. Then circle the letter for the correct answer.

- 1** Gene bought a yacht for \$320,000. Sales tax is 6%. What is the price of the yacht including sales tax?

**A** \$192,000  
**B** \$320,600  
**C** \$339,200  
**D** \$380,000

- 2** Lisa buys a couch that costs \$872. She pays a total of \$920.83, including sales tax.

State	Sales Tax (%)
Arizona	5.6
California	7.25
Illinois	6.25
Oklahoma	4.5

Based on the table, where did Lisa buy the couch?

**F** Arizona  
**G** California  
**H** Illinois  
**J** Oklahoma

- 3** Luke got a job that pays \$185 per week. He wants to save \$1,000. If the income tax rate is 10%, about how many weeks will he have to work to have \$1,000?

**A** 5 weeks  
**B** 6 weeks  
**C** 7 weeks  
**D** 9 weeks

- 4** Jen wants to buy the entire outfit she sees in a store window. The table shows the prices of the outfit's pieces.

Shirt	\$22
Pants	\$30.25
Sneakers	\$45.99

If sales tax is 6.5%, how much will the outfit cost altogether?

**F** \$91.74  
**G** \$98.24  
**H** \$104.63  
**J** \$163.24

- 5** Brian gets paid \$550 per week. The table shows income tax rates.

Income (\$)	Tax (%)
0 – 9,075	10
9,075 – 36,900	15
36,900 – 89,350	25

Brian takes two weeks of unpaid vacation each year. How much does Brian pay in income tax each year?

**A** \$4,125  
**B** \$6,875  
**C** \$8,250  
**D** \$15,000



## ★ Assessment

**DIRECTIONS** Read each question. Then circle the letter for the correct answer.

- 1 Max earns \$60,000 per year. The table shows the tax rate if he is single or married.

Status	Income Tax (%)
Single	25
Married filing jointly	15

How will the amount of income tax he pays be affected if he changes from his status from single to married filing jointly?

- A It decreases by \$6,000.  
 B It decreases by \$10,000.  
 C It increases by \$3,000.  
 D It increases by \$15,000.
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- 2 Sue bought a computer advertised for \$650. She paid \$676 with sales tax. Which statement is true?

- F She paid a sales tax of 2.6%.  
 G She paid a sales tax of 4.0%.  
 H She paid an income tax of 2.6%.  
 J She paid an income tax of 4.0%.
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- 3 Dean earned \$40,000 last year. The income tax rate is 15%. What is Dean's net income?

- A \$6,000  
 B \$34,000  
 C \$38,500  
 D \$46,000

- 4 Dylan bought a cowboy hat for \$72, jeans for \$48, and boots for \$126. The sales tax rate is 6.25%. Which expression represents Dylan's total bill?

- F  $(72 + 48 + 126) - 0.0625(72 + 48 + 126)$   
 G  $72 + 48 + 126 + 0.0625$   
 H  $0.0625(72 + 48 + 126)$   
 J  $0.0625(72 + 48 + 126) + (72 + 48 + 126)$
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- 5 Laura earned \$2,500 for one month's worth of work. She paid \$375 in income tax. What decimal number represents the income tax rate?

Record your answer and fill in the bubbles on the following grid. Be sure to use the correct place value.

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+	0	0	0	0		0	0
-	1	1	1	1		1	1
	2	2	2	2		2	2
	3	3	3	3		3	3
	4	4	4	4		4	4
	5	5	5	5		5	5
	6	6	6	6		6	6
	7	7	7	7		7	7
	8	8	8	8		8	8
	9	9	9	9		9	9