

Objective

Sales Tax, Income Tax, and Fees

Warm-Up



Use the Distributive Property to rewrite each product. Then simplify the product. Round to the nearest penny.

1.  $\$9.20 (1 + 0.075)$

Sample worked out



$$\begin{aligned}
 &9.20 (1 + 0.075) \\
 &9.20 (1) + 9.20 (0.075) \\
 &9.20 + 0.69 = 9.89 \\
 &= \$9.89
 \end{aligned}$$

2.  $\$33.26 (1 + 0.067)$

3.  $\$24 (1 + 0.053)$



Income tax is a percent of a person's or company's earnings that is collected by the government. State income tax is defined and applied differently according to the state in which you live. For example, in 2012, New York residents might have paid over 8% of their earnings in state income tax, while residents of Nevada and Texas did not pay state income tax.

**1. If the income tax rate is 4%, determine the amount of income tax paid on an income of:**

**a. \$40,000.**

**b. \$60,000.**

**c. \$75,000.**

**2. Write an equation to describe the amount of income tax paid on an income of  $x$  dollars if the income tax rate is 4%**

**3. Suppose the income tax rate is 6%. Determine the amount of money remaining after paying income tax on an income of:**

**a. \$50,000.**

**b. \$80,000.**

**c. \$95,000.**

**4. Write an algebraic equation to describe the amount of money remaining after income tax is paid on an income of  $x$  dollars if the income tax rate is 6%.**

**5. Suppose the income tax rate is 5%. Determine a person's income before taxes if the amount of money taken out in taxes is:**

**a. \$100.**

**b. \$500.**

**c. \$2000.**

**6. Maxine moved out of state and just got her first job, paying \$21.50 per hour. She works 40 hours per week and gets paid every 2 weeks. She pays 4% state income tax. How much does Maxine have remaining after state income tax is deducted from her paycheck?**

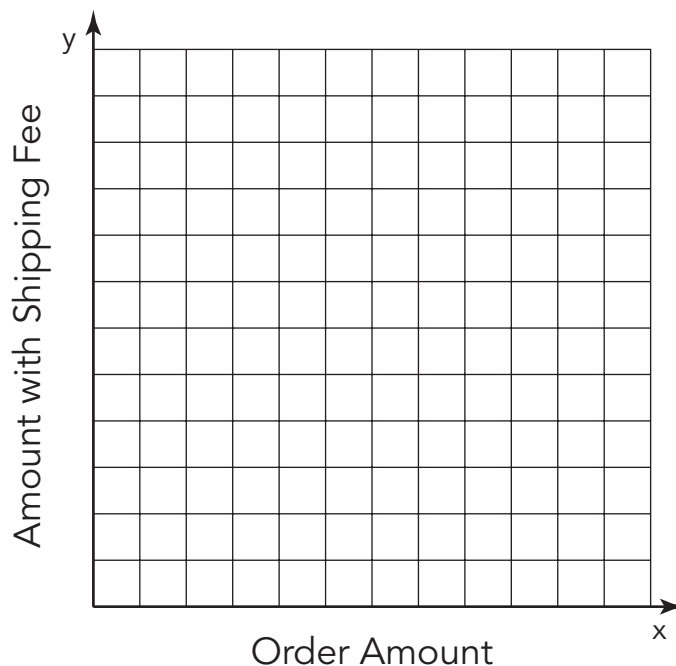


Tori orders yarn online to make hats for her crochet store. Because she orders her materials from out of the country, she pays a total of 20% in fees, including shipping, on each order.

1. Identify the constant of proportionality and interpret its meaning.

2. Complete the table to determine the amounts Tori paid on each of the four orders shown. Then create a graph.

Order Amount	Amount with Shipping Fee
\$10	
\$15	
\$20	
\$5	



3. Write an equation to represent the relationship between the order amount and the total amount with shipping fees.



**Show You  
KNOW**

Life and Taxes

You have learned about markups and markdowns, tips, discounts, commissions, fees, and taxes.

**1. What similarities and differences can you describe about all of these percent relationships?**

**2. Which of the percent relationships represent an increase from an original amount? Which represent a decrease?**

**Explain your answers.**



## LESSON 4.3b No Taxation Without Calculation



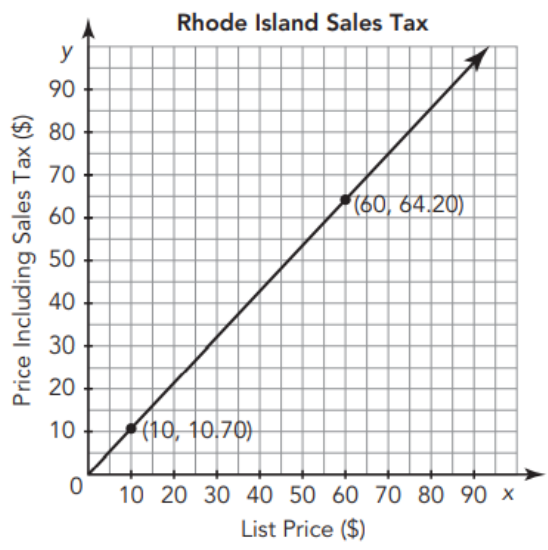
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### Practice

1. Three friends live in three different states. Monica lives in Rhode Island, Anthony lives in Ohio, and Thomas lives in Colorado.

Colorado Sales Tax	
List Price (\$)	Price Including Sales Tax (\$)
3.50	3.60
8.75	9.00
10.99	11.31

Ohio Sales Tax
$y = 1.055x$ , where $x$ is the sales price in dollars and $y$ is the price including sales tax, in dollars.



- Determine the sales tax rate in each state. Show your work.
  - All three friends want to purchase the same gaming system so they can play games together. The list price of the gaming system is \$349.99. How much will each friend pay for the gaming system?
2. Jesse earned a total of \$75,000 this year. He lives in the District of Columbia where the local income tax rate is 8.5% for all incomes over \$40,000.
- How much will Jesse pay in income tax?
  - How much money will Jesse have after paying his income tax?