

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. $\$7.80 (1 + 0.055)$

Sample worked out



$$7.80 (1 + 0.055)$$

$$7.80 (1) + 7.80 (0.055)$$

$$7.80 + 0.429 = 8.229$$

$$= \$8.30$$

2. $\$36.41 (1 + 0.047)$

3. $\$22 (1 + 0.07)$

GETTING STARTED

Pay the Piper

If you have ever bought something at the store, you may have noticed that the actual cost of the item ended up being more than what was listed. This is because sales tax is often added to the purchase price. **Sales tax** is a percentage of the selling price of a good or service which is added to the price.

Sales tax percents vary from state to state, though they are usually between 4% and 7%. The percents can also change over time. Sales tax is one of the largest sources of earnings for state governments. Sales taxes fund transportation and public schools.

1. The table shown lists 13 states and the different sales tax added to every dollar of a purchase as of January 2016. Complete the table by determining the tax amount added to each purchase amount. If necessary, round your answer to the nearest penny.

State	Sales Tax (percent)	Tax on \$10.00 (dollars)	Tax on \$100.00 (dollars)
Indiana	7		
Florida	6		
Arizona	5.6		
Kansas	6.5		
Alabama	4		
Missouri	4.225		
Minnesota	6.875		
Oklahoma	4.5		
Utah	5.95		
Colorado	2.9		
Illinois	6.25		
North Carolina	4.75		
Nebraska	5.5		



Past sales tax information for California, Maine, and Texas is shown.

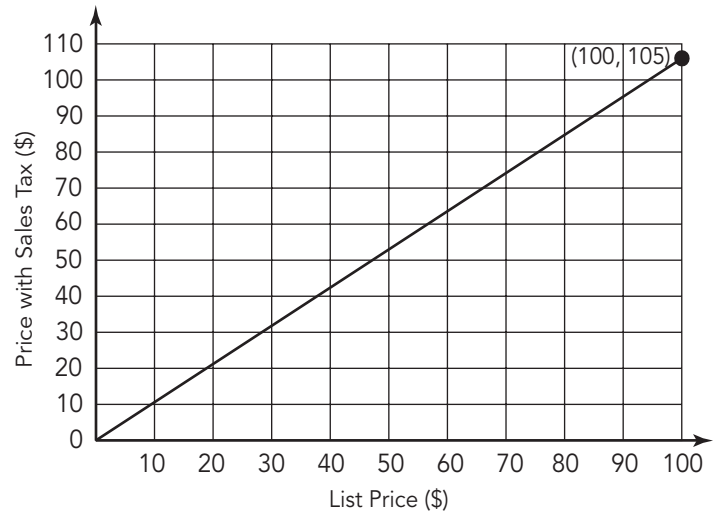
California

List Price of an Item (\$)	Price Including Sales Tax (\$)
12	12.99
30	32.48
117	126.65
200	216.63
250	270.63
369.52	400

Texas

$y = 1.0625x$,
where x is
the list price
and y is the
price including
sales tax.

Maine



1. Consider the three state tax representations to answer each question.

a. Determine the cost, including sales tax, of an item which has a list price of \$150 for each state. Show all of your work and explain your reasoning.

b. Determine the list price of an item that cost \$200 including sales tax for each state. Show all of your work and explain your reasoning

**c. Which of the three states had the highest sales tax?
Explain your reasoning.**

**d. What was the sales tax percent in each of the three states?
Explain your reasoning.**

2. Consider the equation for the sales tax in Texas. Why is multiplying the list price by 1.0625 to determine the price including tax the same as calculating the sales tax and then adding it to the list price?

3. The table shows the price of several products and the amount of sales tax added to the price in Pennsylvania.

Cost of Product (dollars)	Sales Tax (dollars)
16	0.96
20	1.20
80	4.80

a. What percent is Pennsylvania's sales tax? How do you know?

b. How much sales tax would there be on a \$750 flat screen TV? Show how you determined your answer.

c. If the sales tax on a lawn mower is \$48, how much is the cost of the mower?



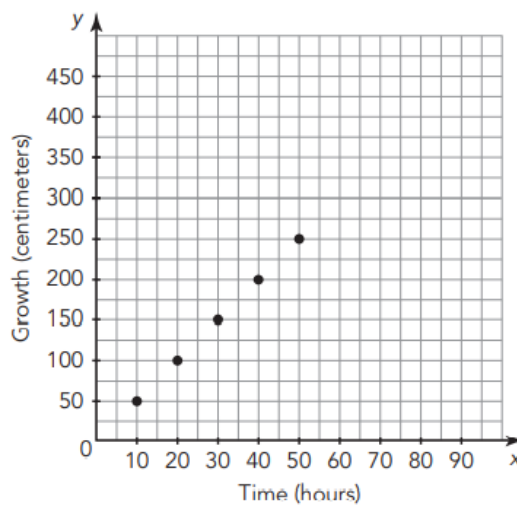
LESSON 4.3a
No Taxation Without Calculation



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Review

- Determine each total cost, including a 20% tip, for the following bill amounts. Round to the nearest penny.
 - \$45.80
 - \$103.65
- The graph shows how many centimeters a bamboo plant can grow and the number of hours that the plant has been growing. Determine the constant of proportionality and explain what it means.



- In the middle school and high school jazz bands, the number of girls is proportional to the total members. Write a constant of proportionality for this situation and explain what it means.

Jazz Band	Number of Girls	Total Members
Middle School	6	15
High School	8	20

- Write each as a unit rate.
 - \$180 in 5 hours
 - \$1 in tax for \$20 spent

