Lesson 7-7

Example 1 Find the Total Cost
TELEVISION A small television costs $120, and the sales tax is 6.5%. What is the total cost of the television?

Method 1 Add sales tax to the regular price.

First, find the sales tax.
6.5% of $120 = 0.065 · 120   Write 6.5% as a decimal.
              = 7.80   The sales tax is $7.80.

Next, add the sales tax to the regular price.
7.80 + 120 = 127.80

Method 2 Add the percent of tax to 100%.

100% + 6.5% = 106.5%   Add the percent of tax to 100%.
The total cost is 106.5% of the regular price.
106.5% of $120 = 1.065 · 120   Write 106.5% as a decimal.
                = 127.80   Use a calculator.

The total cost of the television is $127.80.

Example 2   Find the Sale Price
BOOTS Angela wants to buy a pair of boots that has a regular price of $129. This week, the boots are on sale at a 20% discount. What is the sale price of the boots?

Method 1 Subtract the discount from the regular price.
First, find the amount of the discount, d.
20% of $129 = 0.20 · $129   Write 20% as a decimal.

            = $25.80   The discount is $25.80.

So, the sale price is $129 – $25.80 or $103.20.

Method 2 Subtract the percent of discount from 100%.
100% – 20% = 80%
So, the sale price is 80% of the regular price.
80% of 129 = 0.8 · $129   Write 80% as a decimal.
           = $103.20   Use a calculator.

So, the sale price of the books is $103.20.

Example 3 Find the Percent of Discount
BICYCLE A bicycle regularly priced at $189 is on sale for $159. What is the percent of discount?

First, find the *amount* of discount.
$189 – $159 = $30
Next, use the percent equation to find the percent discount.

Words $30 is what percent of $189?
Variable   Let n represent the percent.
Equation $30 = n \cdot 189$

$30 = n \cdot 189$ Write the equation.
$16 \approx n$ Divide each side by 189 and simplify.

The percent of discount is about 16%.