

## Lesson 6-3

## Example 1

Find the discount and the sale price of a home theater system with a regular price of \$495 and a 15% discount rate.

## Solution

Use an equation.

discount = percent of discount · regular price

$$d = 15\% \cdot \$495.00$$

$$d = 0.15 \cdot 495.00$$

$$d = 74.25$$

Use a proportion.

$$\frac{d}{495.00} = \frac{15}{100}$$

$$d \cdot 100 = 495.00 \cdot 15$$

$$100d = 7425$$

$$\frac{100d}{100} = \frac{7425}{100}$$

$$d = 74.25$$

The discount is \$74.25.

Find the sale price.

sale price = regular price - discount

$$s = 495.00 - 74.25$$

$$s = 420.75$$

The sale price is \$420.75.

**Example 2**

A dress is on sale for \$54.40. The regular price of the dress is \$68. Find the percent of discount.

**Solution**

Find the discount.

$$\begin{aligned}\text{discount} &= \text{regular price} - \text{sale price} \\ d &= 68.00 - 54.40 \\ d &= 13.60\end{aligned}$$

The discount is \$13.60.

Find the percent of discount.

$$\begin{aligned}\text{percent of discount} &= \frac{\text{discount}}{\text{regular price}} \\ p &= \frac{13.60}{68.00} \\ p &= 0.2 = 20\% \quad \text{Convert decimal to a percent.}\end{aligned}$$

The percent of discount is 20%.

**Example 3**

Mr. and Mrs. Myers bought a new side-by-side refrigerator at an appliance store that was having a  $33\frac{1}{3}\%$ -clearance sale on all merchandise. The regular price of the refrigerator they selected is \$1260. Find the sale price.

**Solution**

Use mental math.

$$33\frac{1}{3}\% = \frac{1}{3}$$

$\frac{1}{3}$  of \$1200 is \$400 and  $\frac{1}{3}$  of \$60 is \$20, so  $\frac{1}{3}$  of \$1260 is \$420.

$$\$1260 - \$420 = \$840$$

The sale price is \$840.