

Lesson 6-2

Example 1

What number is 80% of 95?

Solution

Find the percent of a number by writing an equation using a decimal or fraction.

What number is 80% of 95?

$$\underbrace{\hspace{2cm}}_x \square\square \square\square = 0.80 \cdot 95$$

$$x = 76$$

What number is 80% of 95?

$$\underbrace{\hspace{2cm}}_x \square\square \square\square = \frac{4}{5} \cdot 95$$

$$x = 76$$

76 is 80% of 95.

Example 2

What percent of 140 is 49?

Solution

Write an equation. Let p = the percent.

What percent of 140 is 49?

$$\underbrace{\hspace{2cm}}_p \square\square \square\square \cdot 140 = 49$$

$$140p = 49$$

$$\frac{140p}{140} = \frac{49}{140}$$

$$p = 0.35$$

$0.35 = 35\%$ Convert to a percent.

35% of 140 is 49.

Example 3

72% of what number is 108?

Solution

$$\begin{array}{r}
 \text{72\% of what number is 108?} \\
 \square \square \quad \underbrace{\hspace{2em}} \quad \square \square \\
 0.72 \cdot \quad x \quad = 108 \\
 0.72x = 108 \\
 \frac{0.72x}{0.72} = \frac{108}{0.72} \\
 x = 150
 \end{array}$$

72% of 150 is 108.

Example 4

EDUCATION Geoff bought 3 college textbooks for a total of \$188. He paid \$12.22 in sales tax. What is the sales tax rate?

Solution

Let the sales tax rate be s . Write and solve an equation.

What percent of \$188 is \$12.22?

$$\begin{array}{r}
 s \cdot 188.00 = 12.22 \\
 188.00s = 12.22 \\
 \frac{188.00s}{188.00} = \frac{12.22}{188.00} \\
 s = 0.065 \quad 0.065 = 6.5\%
 \end{array}$$

The sales tax rate is 6.5%.