7.4 The Percent Equation

Goal: Use equations to solve percent problems.

The Percent Equation

You can represent "a is p percent of b" using the equation

$$a = p\% \cdot b$$

where a is a part of the base b and p% is the percent.

Example 1 Finding a Part of a Base

In a newspaper's survey, 1100 adults were asked to name their favorite condiment. The most frequent response was ketchup, which was given by 47% of the adults. How many adults chose ketchup? 517 adults 100

Solution

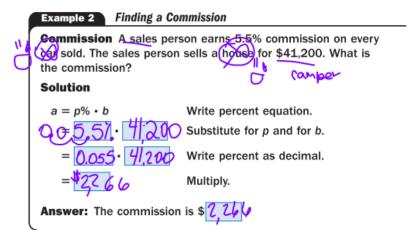
To find how many adults chose ketchup as their favorite condiment, use the percent equation.

$$a = p\% \cdot b$$
 Write percent equation.

Answer: The number of adults who chose ketchup as their favorite condiment was

Checkpoint Use the percent equation to answer the question.

1. What number is 15% of 60?

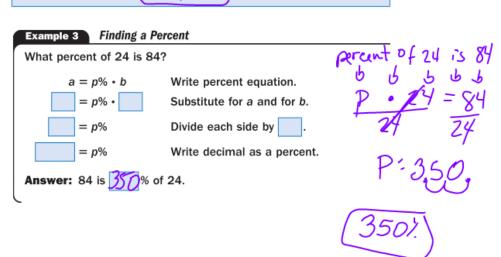


Checkpoint

3. In Example 2, find the commission if a car is sold for \$45,000.

0.05,57. • 45,000

0.05,5 • 45,000



⊘ Checkpoint Use the percent equation to answer the question.

4. What percent of 15 is 21?

P • 15 = 21

P-149

5. What percent of 72 is 45?

P= 0, 620

62,5%

Example 4 Finding a Base

Football Your friend paid \$48 for a ticket to a professional football game. This amount was 64% of the total amount your friend spent

at the game. How much money did your friend spend?

Solution

 $a = p\% \cdot b$ Write percent equation.

= % • b Substitute for a and for p.

= • b Write percent as decimal.

= b Divide each side by

Answer: Your friend spent \$ at the game.

Checkpoint Use the percent equation to answer the question.

6. 33 is 30% of what number?

7. 90 is 37,5% of what number?