Now You Try It!

Use the space provided to work out the solution to the next example.

Example A Application: Determining Commission

Lynsay earns a salary of $1250 a month plus a commission of 5% on all electronics she sells at her job at the local computer store. What did she earn the month she sold $28,640 in electronics?

Solution

Looking Ahead

Converting between percentages and decimal numbers is an important skill to have for personal finance, as many values related to personal finance are reported as percentages. A key step when using formulas that involve percentages is to first convert the provided percentage as a decimal number.

Example Preview

An online lending company is offering simple-interest personal loans based on consumer credit scores. An individual with a credit score of 720 can get an interest rate of 9.99%. If the individual takes out a $3500 loan and doesn't pay it back for 4 years, how much interest would accrue over that time period?

Solution

In this case, the principal $P = \$3500$ and the time $t = 4$. The interest rate is given as a percentage and must first be converted to a decimal number. That is, $r = 9.99\% = 0.0999$. Substituting these values into the simple interest formula and simplifying gives us the following.

$$I = (\$3500)(0.0999)(4) = \$1398.60$$

Thus, the interest accrued on the loan over 4 years is $1398.60.

6.R.2 Exercises

Concept Check

True/False. Determine whether each statement is true or false. If a statement is false, explain how it can be changed so the statement is true. (**Note:** There may be more than one acceptable change.)

1. To change a decimal number to a percent, move the decimal point two places to the left and add the sign.

2. When using the basic formula $R \cdot B = A$, the word "of" means to divide.

3. If an item is selling for a 35% discount, the customer will pay 65% of the original price.

4. A car was purchased in 1965 for \$3800. It sold for \$1200 in 2011. This is an example of depreciation.

Practice

5. Change the following decimal to a percent.

0.012

6. Change the following percent to a decimal.

11%

7. Change $1\frac{1}{4}\%$ to a fraction and reduce, if possible.

8. Change the following fraction to a percent.

$\frac{16}{25}$

Find the unknown quantity. Round your answer to two decimal places, if necessary.

9. 111% of 189 is _____

10. 50% of _____is 803.

11. _____% of 773 is 343.

Applications

Solve.

12. A sales clerk receives a monthly salary of $950 plus a commission of 7% on all sales over $3200. What did the clerk earn the month that he sold $13,500 in merchandise? Follow the problem-solving process and round your answer to the nearest cent, if necessary.

13. The population of white-tailed deer in a region was counted to be 321. The population in the same region the previous year was 300. Find the percent increase in the white-tailed deer population. Round your answer to the nearest hundredth, if necessary.

14. A few years ago, Sarah acquired a parcel of land valued at $13,800. Today, that same parcel of land has a value of $14,628. Find the percent increase in the property's value. Round your answer to the nearest hundredth, if necessary.

Writing & Thinking

15. A man weighed 200 pounds. He lost 20 pounds in 3 months. Then he gained back 20 pounds 2 months later.

a. What percent of his weight did he lose in the first months?

b. What percent of his weight did he gain back?

c. The loss and gain are the same, but the two percentages are different. Explain why.