4 Chapter Review

Key Words
For #1 to #3, unscramble the letters. Use the clues to help you.

1. PCEERNT

   _____ means out of 100.

2. FIONAARTCL

   A _____ percent is a percent that is less than 1%.

3. CIMBOEND

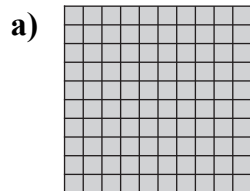   Percents that are added together are called _____ percents.

4.1 Representing Percents, pages 166–171

4. How many hundred grids are needed to show each percent?

   a) 55% _____ **b)** 589% _____
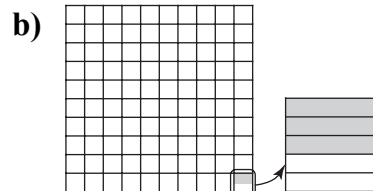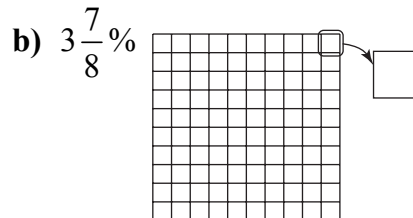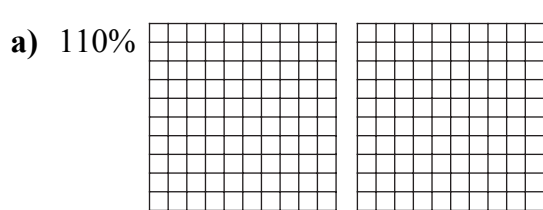
5. What percent is shown in each diagram?

   1 shaded grid = 100%

   a)

   b)

   _____ _____

6. Use hundred grids to show each percent.

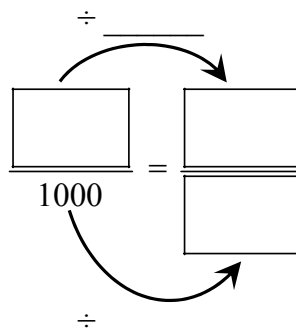   **a)** 110% **b)** $3\frac{7}{8}\%$

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4.2 Fractions, Decimals, and Percents, pages 173–186

7. Write 0.115 as a percent and a fraction. Write the fraction in lowest terms.

Percent:

_____ × 100 = _____%

Fraction:

$$\div \underline{\qquad}$$

$$\div \underline{\qquad}$$

8. Write $\dfrac{3}{200}$ as a decimal and a percent.

Decimal:

_____ ÷ _____ = _____

Percent:

_____ × 100 = _____%

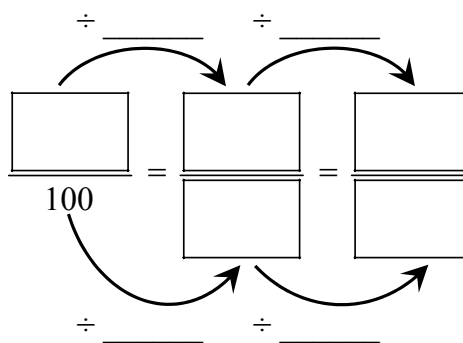**9.** Write each percent as a decimal and a fraction in lowest terms.

a) Sales increased by 140%.

Decimal:

_____ ÷ _____ = _____

Fraction:

$$\div \underline{\qquad} \qquad \div \underline{\qquad}$$

$$\div \underline{\qquad} \qquad \div \underline{\qquad}$$

b) You can reduce harmful emissions by $\dfrac{9}{10}$% if you get your car tuned up.

> Look at the last place value of the decimal.

Decimal:

$\dfrac{9}{10}$% = 0._____%

Fraction:

$$\boxed{\dfrac{9}{}}$$

0._____% ÷ 100 = _____

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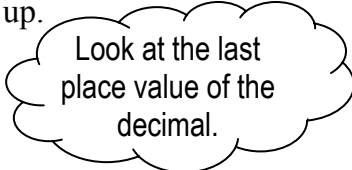
4.3 Percent of a Number, pages 188–194

10. Find the percent of each number.

a) 115% of 230

Write 115% as a decimal: _____

_____ × _____ = _____%

b) 500% of 0.2

500% = 100% + 100% + _____ + _____ + _____

100% of 0.2 = _____

500% of 0.2 = _____ + _____ + _____ + _____ + _____

= _____

or

Write 500% as a decimal: _____

_____ × _____ = _____

c) $\frac{1}{10}$% of 800

$\frac{1}{10}$% = 0._____%

To write the percent as a decimal, divide by 100.

_____% = _____ ÷ 100

= _____

Multiply the decimal by 800.

_____ × 800 = _____

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11. Julia borrowed $100 from her brother.
He charged her 5% interest per month.
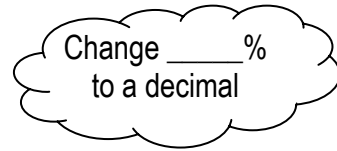How much does Julia owe her brother at the end of the month?

Interest = 5% of $100

> Change _____% to a decimal

= _____ × _____

Amount owed = amount borrowed + interest

= _____ + _____

= _____

Sentence: _____

4.4 Combining Percents, pages 196–202

12. Cedarville had a population of 1200 people.
During the last 2 years, its population has increased by 15%.
What is the new population of Cedarville?

Sentence: _____

13. The cost of an airline ticket is $289.50.
Find the total cost after adding 5% GST, 7% PST, and 1% airport improvement tax.

Sentence: _____