

Key Words

Unscramble the letters for each puzzle. Use the clues to help you solve the puzzles.

1. R C E E T N P

■ means *out of 100*.

2. C R A T F I O L N A

A ■ percent is a percent that includes a portion of 1%.

3. M C N O B D E I

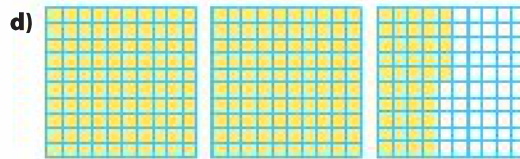
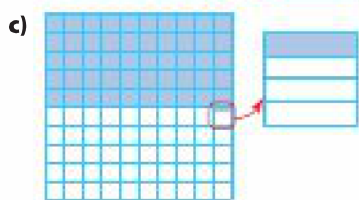
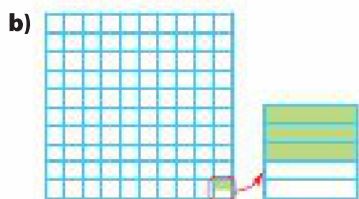
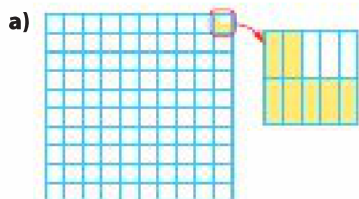
Percents that are added together are ■ percents.

4.1 Representing Percents, pages 122–129

4. How many hundred grids are needed to show each of the following percents?

a) 101% b) 589% c) 1450%

5. What percent does each diagram represent? One completely shaded grid represents 100%.



6. Use hundred grids to represent each percent.

a) 110% b) $\frac{1}{10}\%$ c) $7\frac{7}{8}\%$
d) 172.5% e) 0.75% f) 500%

7. Use hundred grids to show

a) 0.4% b) 12% c) 115%

8. Represent the percent in each statement on a hundred grid.

a) 79.1% of all students are right-handed.
b) The average person in Canada uses about 223% as much water per day as the average person in France.
c) The school enrollment increased by 0.8% this year.

4.2 Fractions, Decimals, and Percents, pages 130–137

9. Copy and complete the following table. The first row is done for you.

Fraction	Decimal	Percent
$1\frac{2}{5}$	1.4	140%
a)	0.115	
b)		$23\frac{3}{4}\%$
c) $\frac{3}{200}$		
d)	3.85	

10. A coach asked the team to give 110%.
- What is this value as a fraction and as a decimal number?
 - What does this statement mean to you?
11. Express each percent as a decimal number and as a fraction. Rewrite each sentence using either the decimal or fraction form.
- Kyle scored 95.5% on a practice test.
 - The store's sales increased by 140%.
 - By getting your car tuned up, you can reduce emissions by $\frac{9}{10}\%$.

4.3 Percent of a Number, pages 138–143

12. Determine the following. Write your answer to the nearest tenth.
- 115% of 230
 - $80\frac{3}{4}\%$ of 50
 - 500% of 0.02
 - $\frac{1}{10}\%$ of 800
 - $63\frac{4}{5}\%$ of 12 000
 - 0.05% of 1 000 000
13. A photocopier increased a diagram to 250% of its original size. What is the enlarged length of the diagram if its original length was 2.5 cm?
14. Julia borrowed \$100 from her brother. Her brother charged her $5\frac{1}{2}\%$ interest per month on the loan. She paid him back after one month. How much interest did she pay?

15. A forester recorded the following data on tree types.

Tree Species	Number of Trees
Fir	567
Pine	324
Larch	156
Cedar	89
Hemlock	678

- What is the total number of trees recorded?
- What percent of the total does each tree species represent?



4.4 Combining Percents, pages 144–149

16. The cost of an airline ticket is \$289.50. Added to this cost is 5% GST, 7% PST, 1% airport improvement fee, and $\frac{3}{4}\%$ booking fee. What is the total cost of the ticket?
17. One year, the towns of Cedarville and Pinedale each had the same population of 1200. Over the next two years, the population of Cedarville increased by 8% one year and 7% the next year. Over the same two years, the population of Pinedale increased by 15%.
- Did the population of each town increase by the same amount? Explain.
 - What was the new population of each town?