

4

Practice Test

For #1 to #5, choose the best answer.

1. What is 0.0235 as a percent?
A 2.35% **B** 0.235%
C 0.0235% **D** 0.002 35%

2. What is 135% as a decimal?
A 0.135 **B** 1.35
C 13.5 **D** 135

3. What is $66\frac{2}{3}\%$ as a fraction?
A $\frac{1}{3}$ **B** $\frac{1}{2}$
C $\frac{2}{3}$ **D** $\frac{3}{4}$

4. What is $\frac{1}{8}$ as a percent?
A 0.0125% **B** 0.125%
C 1.25% **D** 12.5%

5. A bicycle is on sale for 10% off the original price of \$420.00. When it does not sell, the store reduces the sale price by another 5%. What is the final sale price of the bicycle?
A \$357 **B** \$359.10
C \$378.50 **D** \$405

Complete the statements in #6 and #7.

6. One completely shaded grid represents 100%. The hundred grids shown represent $\blacksquare\%$.



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7. One completely shaded grid represents 100%. The hundred grid shown represents $\blacksquare\%$.



Short Answer

8. Use hundred grids to represent the following percents.

- a)** 0.1%
b) 35%

- c)** 102%

9. Convert each of the following:

- a)** 15% to a decimal and a fraction in lowest terms

- b)** 1.24 to a percent and a fraction in lowest terms

- c)** $\frac{13}{25}$ to a decimal and a percent

10. Suppose a real estate agent receives 5% commission on the first \$250 000 of a house's selling price and 7% on the remaining amount. If a house sells for \$423 000, how much commission does the real estate agent make on the sale of the house?

11. A census recorded the population of a town at 50 000. The population of the town increased by 0.7% in each of the next two years. What was the population at the end of the two years? Round your answer to the nearest whole number.

12. Helen bought a scooter for \$64.98 plus 5% GST and 7% PST.



- a)** How much tax did she pay altogether?
b) What was the total price of the scooter?

Extended Response

13. During a magazine drive, the school drama club receives 25% of the sales as commission for the first \$5000 worth of magazine subscriptions sold. The parent committee agrees to donate to the club an additional 125% of the total commission earned by the club.

- a)** How much commission will the club earn if members sell \$6000 worth of subscriptions?
b) How much will the parent committee donate to the club?
c) How much will the club receive from the magazine drive altogether?

14. An Arctic ice study found that in the summer, 70% of an ocean region was ice covered. The study also predicted the region's ice would be reduced by 6% per year.



- a)** What percent of the region will be ice covered after the first year? Express your answer to the nearest tenth of a percent.
b) What percent of the region will be ice covered after the third year? Express your answer to the nearest tenth of a percent.
c) How many years will pass before less than one half of the region is covered by ice?

WRAP IT UP!

Use the information about water that you have gathered in the Math Links throughout this chapter to help you develop a water conservation plan that identifies at least five ways you could conserve fresh water. For each suggestion, estimate how much water you would use before the conservation method and how much you would save using the conservation method (in volume and in percent). Record your total savings as a percent of the original estimated water consumption.

Present your plan in the form of a newspaper article, cartoon strip, or another format of your choice.

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MathLinks 8, pages 152–153

Suggested Timing

40–50 minutes

Materials

- hundred grids
- coloured pencils
- ruler
- calculator

Blackline Masters

Master 10 Hundred Grids
 BLM 4–14 Chapter 4 Test

Planning Notes

Provide students with **Master 10 Hundred Grids**. Encourage them to use mental math strategies to solve problems involving percents. Have students start the practice test by writing the question numbers in their notebook. Have them indicate which questions they need a little help with, a lot of help with, or no help with. Have students first complete the questions they know they can do. Then have them complete the questions they know something about. Finally, have students do their best on the questions that they are struggling with.

This practice test can be assigned as an in-class or take-home assignment. Provide students with the number of questions they can comfortably do in one class. These are the minimum questions that will meet the related curriculum outcomes: #1–#9 and #11–#13.

Study Guide

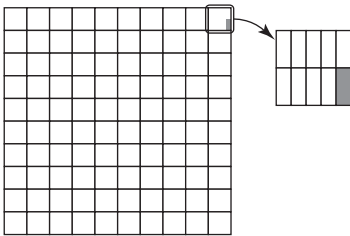
Question(s)	Section(s)	Refer to	The student can ...
1, 2, 4, 9	4.2	Examples 1, 2, 3, 4	✓ convert between fractions, decimals, and percents
3	4.2 4.3	Example 3 Example 2	✓ convert between fractions, decimals, and percents ✓ solve problems involving fractional percents
5, 14	4.4	Example 2	✓ solve problems involving percents of percents
6, 7	4.1	Explore the Math Example 1	✓ show percents that are between 0% and 100% ✓ show percents that are greater than 100%
8	4.1	Explore the Math Example 2	✓ show percents that are between 0% and 100% ✓ show percents that are greater than 100% ✓ show percents involving fractions
10, 12	4.4	Explore the Math Example 1	✓ solve problems involving combined percents
11	4.3 4.4	Example 2 Example 2	✓ solve problems that involve percents less than 1% ✓ solve problems involving percents of percents
13	4.3	Example 2	✓ solve problems involving percents greater than 100%

Answers

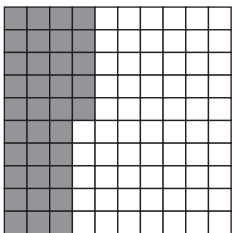
Chapter 4 Practice Test

1. A 2. B 3. C 4. D 5. B 6. 130% 7. $\frac{2}{5}\%$ or 0.4%

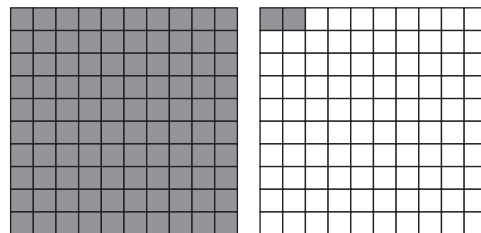
8. a)



b)



c)



9. a) 0.15 or $\frac{3}{20}$ b) 124% or $\frac{31}{25}$ c) 0.52 or 52%

10. \$24 610 11. 50 702

12. a) \$7.80 b) \$72.78

13. a) \$1250 b) \$1562.50 c) \$2812.50

14. a) 65.8% b) 58.1% c) 6 years

Assessment	Supporting Learning
<i>Assessment as Learning</i>	
<p>Chapter 4 Self-Assessment Have students review their earlier responses in the What I Need to Work On tab of their chapter Foldable.</p>	<ul style="list-style-type: none"> • Have students use their responses on the practice test and work they completed earlier in the chapter to identify areas in which they may need to reinforce their understanding of skills or concepts. Before the chapter test, coach them in the areas in which they are having difficulties.
<i>Assessment of Learning</i>	
<p>Chapter 4 Test After students complete the practice test, you may wish to use BLM 4–14 Chapter 4 Test as a summative assessment.</p>	<ul style="list-style-type: none"> • Consider allowing students to use their chapter Foldable. • Consider using the Math Games on page 154 or the Challenge in Real Life on page 155 to assess the knowledge and skills of students who have difficulty with tests.