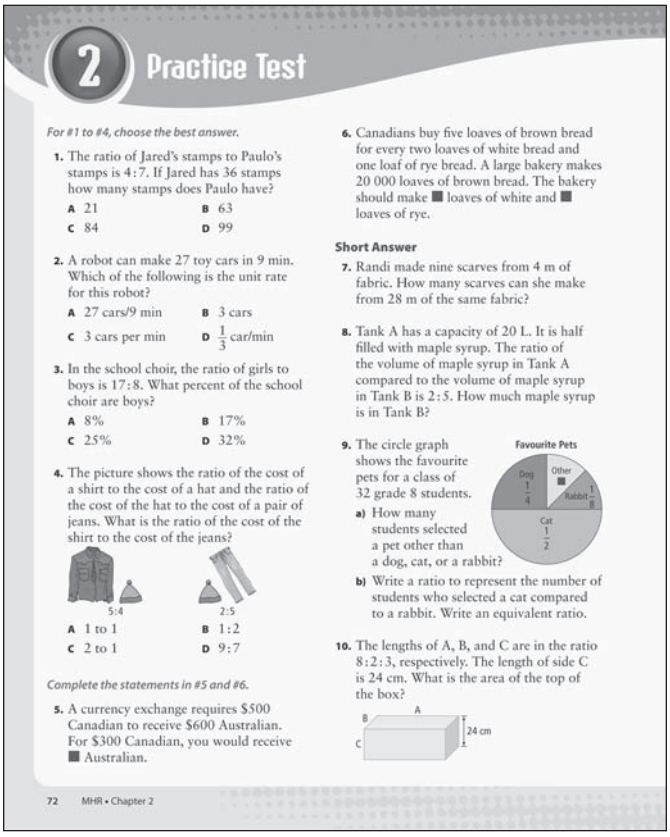
2 Practice Test



2 Practice Test

For #1 to #4, choose the best answer.

1. The ratio of Jared's stamps to Paulo's stamps is 4:7. If Jared has 36 stamps how many stamps does Paulo have?

A 21 B 63
C 84 D 99

2. A robot can make 27 toy cars in 9 min. Which of the following is the unit rate for this robot?

A 27 cars/9 min B 3 cars
C 3 cars per min D $\frac{1}{3}$ car/min

3. In the school choir, the ratio of girls to boys is 17:8. What percent of the school choir are boys?

A 8% B 17%
C 25% D 32%

4. The picture shows the ratio of the cost of a shirt to the cost of a hat and the ratio of the cost of the hat to the cost of a pair of jeans. What is the ratio of the cost of the shirt to the cost of the jeans?

5:4 2:5

A 1 to 1 B 1:2
C 2 to 1 D 9:7

Complete the statements in #5 and #6.

5. A currency exchange requires $500 Canadian to receive $600 Australian. For $300 Canadian, you would receive ■ Australian.

6. Canadians buy five loaves of brown bread for every two loaves of white bread and one loaf of rye bread. A large bakery makes 20 000 loaves of brown bread. The bakery should make ■ loaves of white and ■ loaves of rye.

Short Answer

7. Randi made nine scarves from 4 m of fabric. How many scarves can she make from 28 m of the same fabric?

8. Tank A has a capacity of 20 L. It is half filled with maple syrup. The ratio of the volume of maple syrup in Tank A compared to the volume of maple syrup in Tank B is 2:5. How much maple syrup is in Tank B?

9. The circle graph shows the favourite pets for a class of 32 grade 8 students.

Favourite Pets: Dog $\frac{1}{4}$, Other ■, Rabbit $\frac{1}{8}$, Cat $\frac{1}{2}$

a) How many students selected a pet other than a dog, cat, or a rabbit?

b) Write a ratio to represent the number of students who selected a cat compared to a rabbit. Write an equivalent ratio.

10. The lengths of A, B, and C are in the ratio 8:2:3, respectively. The length of side C is 24 cm. What is the area of the top of the box?

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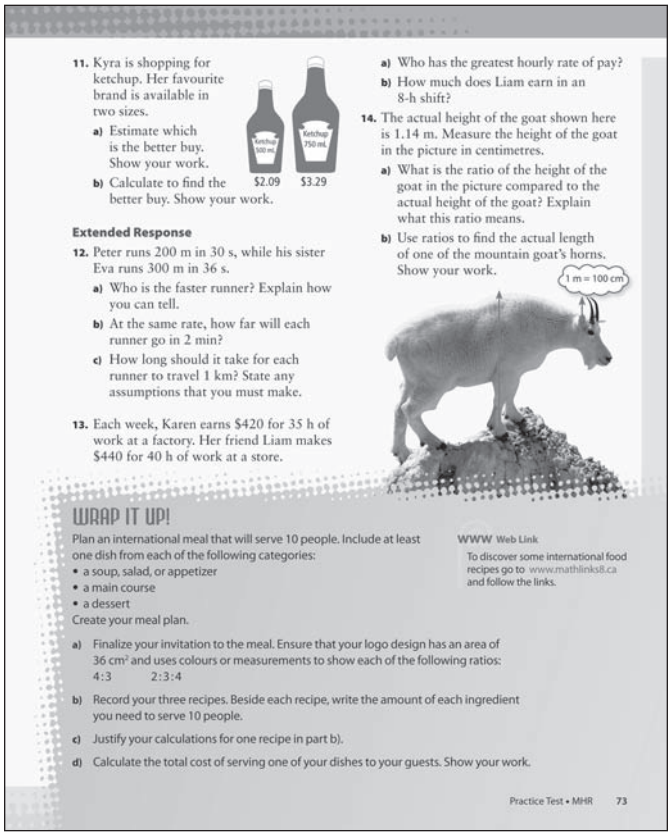

11. Kyra is shopping for ketchup. Her favourite brand is available in two sizes.

$2.09 $3.29

a) Estimate which is the better buy. Show your work.

b) Calculate to find the better buy. Show your work.

Extended Response

12. Peter runs 200 m in 30 s, while his sister Eva runs 300 m in 36 s.

a) Who is the faster runner? Explain how you can tell.

b) At the same rate, how far will each runner go in 2 min?

c) How long should it take for each runner to travel 1 km? State any assumptions that you must make.

13. Each week, Karen earns $420 for 35 h of work at a factory. Her friend Liam makes $440 for 40 h of work at a store.

a) Who has the greatest hourly rate of pay?

b) How much does Liam earn in an 8-h shift?

14. The actual height of the goat shown here is 1.14 m. Measure the height of the goat in the picture in centimetres.

a) What is the ratio of the height of the goat in the picture compared to the actual height of the goat? Explain what this ratio means.

b) Use ratios to find the actual length of one of the mountain goat's horns. Show your work.

WRAP IT UP!

Plan an international meal that will serve 10 people. Include at least one dish from each of the following categories:

- a soup, salad, or appetizer
- a main course
- a dessert

Create your meal plan.

WWW Web Link

To discover some international food recipes go to www.mathlinks8.ca and follow the links.

a) Finalize your invitation to the meal. Ensure that your logo design has an area of 36 cm² and uses colours or measurements to show each of the following ratios: 4:3 2:3:4

b) Record your three recipes. Beside each recipe, write the amount of each ingredient you need to serve 10 people.

c) Justify your calculations for one recipe in part b).

d) Calculate the total cost of serving one of your dishes to your guests. Show your work.

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***MathLinks 8*, pages 72–73**

Suggested Timing
40–50 minutes

Materials
- ruler

Blackline Masters
BLM 2–12 Chapter 2 Test

Planning Notes

Have students start the practice test by writing the question numbers in their notebook. Have them indicate questions with which they need a little help, a lot of help, or no help. Have students first complete the questions they know they can do, followed by those 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–#3, #6, #9, #11, and #12.

Study Guide

Question(s)	Section(s)	Refer to	The student can …
1, 6, 7, 8	2.3	Example 2	✓ solve problems using proportional reasoning ✓ use more than one method to solve proportional reasoning problems
2, 5, 12, 13	2.2	Example 1	✓ express rates using words and symbols ✓ identify, describe, and record rates from real-life examples ✓ solve problems using rates
3, 10	2.1	Examples 1, 2	✓ represent three-term ratios ✓ represent a ratio as a fraction ✓ represent a ratio as a percent ✓ solve problems using ratios
4, 9	2.1	Example 1	✓ represent two-term ratios ✓ identify, describe, and record ratios from real-life examples ✓ solve problems using ratios
11	2.2	Example 2	✓ solve problems using rates
14	2.1	Explore the Math	✓ represent two-term ratios ✓ identify, describe, and record ratios from real-life examples ✓ solve problems using ratios

Answers

Chapter 2 Practice Test

1. B **2.** C **3.** D **4.** B

5. 360 Australian dollars

6. 8000, 4000

7. 63 scarves

8. 25 L

9. a) 4 students **b)** 4 : 1

10. a) 1024 cm^2

11. a) Estimates may vary. Example: Small size: round to \$2.00/500 mL, which is 40¢/100 mL; Large size: round to \$3.20/800 mL, which is 40¢/100 mL. The estimates are the same.

b) Small size: 0.418¢/mL; Large size: 0.4386¢mL. Therefore, the small size is a better buy.

12. a) Peter ran at 6.67m/s and Eva ran at 8.33 m/s. Therefore, Eva is faster.

b) Peter would run 800 m in 2 min; Eva would run 1000 m in 2 min.

c) Peter would take 2.5 min to run 1 km; Eva would take 2 min to run 1 km. Assumptions may vary. Example: Assume they maintain the same rate of speed for the longer distance.

13. a) Karen earns more per hour. She earns \$12/h while Liam earns \$11/h.

b) \$88

14. Answers may vary slightly depending on accuracy of measurement.

a) 4.2 : 114; This ratio compares the reduction to the actual height of the mountain goat.

b) $\frac{4.2}{114} = \frac{0.9}{x} = 24.43$; Actual length of a horn is 24.43 cm.

Assessment	Supporting Learning
Assessment *as* Learning	
Chapter 2 Self-Assessment Have students review their earlier responses in the What I Need to Work On sections of their chapter Foldable.	• 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.
Assessment *of* Learning	
Chapter 2 Test After students complete the practice test, you may wish to use **BLM 2–12 Chapter 2 Test** as a summative assessment.	• Consider allowing students to use their chapter Foldable. • Consider using the Math Games on page 74 or the Challenge in Real Life on page 75 to assess the knowledge and skills of students who have difficulty with tests.