

2.2

Rates*MathLinks 8, pages 55–62***Key Ideas Review**

1. Unscramble the letters to form a word in each blank to complete the statement.
- a) A rate is a comparison of two quantities measured in _____ units.
TFDIFEERN
- b) A rate can be expressed as a _____, but cannot be expressed as a _____.
OFNARTCI
REPTCNE
- c) A unit rate is a rate in which the second term is _____.
NOE
- d) To compare the cost of similar items a unit _____ is useful.
EPCIR

Practise and Apply

2. Determine the unit rate. Show your thinking.
- a) Riding 50 km in 3 h. Round your answer to the nearest hundredth.
- b) Typing 660 words in 10 minutes.
- c) Moving 216 students in 4 buses.
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- d) Carrying 138 apples in 6 bags.
- e) Raising \$315 in 35 h.
- f) Driving 220 km in $2\frac{1}{2}$ h.
3. Calculate the unit rate for each situation. Show your thinking. Then, circle the greater rate for each pair.
- a) \$210 for 30 h or \$198 for 20 h
- b) 574 km in 7 h or 420 km in 5 h
- c) 64 h of sunlight in 16 days or 69 h sunlight in 23 days
4. The Mitchells' car used half a tank of gas when travelling from Edmonton to Calgary, a trip of about 300 km. If the fuel tank's capacity is 54 L, what was the car's fuel consumption rate in L/100 km?

Name: _____

Date: _____

5. You are shopping for yogurt.



- a) What is the unit price for each container of yogurt?
- b) What is the unit price per 100 g for each container of yogurt?
- c) Which container is the best buy? Explain your thinking.

6. Jeremy earned \$1365 after working for half of a year. He expects to continue working for the same number of hours each month, at the same pay rate.

- a) How much will he earn in total after working for a year? Show two different ways of arriving at the answer.

- b) If he works 10 hours a week, what is his hourly rate of pay? Show your thinking.

7. This table lists the approximate area and population of five countries.

Country	Population	Land Area (km ²)	Density
Canada	31 006 000	9 220 000	
Ecuador	12 562 000	278 000	
France	58 978 000	546 000	
Netherlands	15 808 000	34 000	
United States	272 640 000	9 159 000	

- a) Calculate the population density (population/km²) for each country listed. Show your thinking below, then record the values in the table rounded to the nearest hundredth.

- b) List the countries in order from greatest density to least density.

- c) Is population density a rate? **Yes No** Explain.
