2 Chapter Review
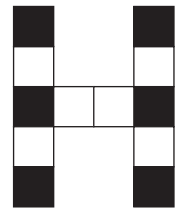
Key Words
For #1 to #5, write the number that matches the description.
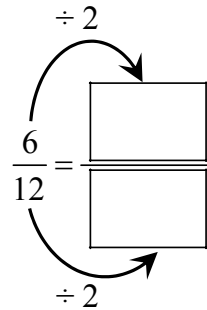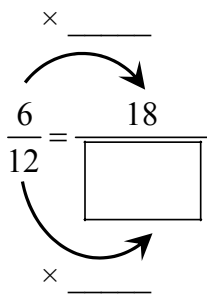
1. proportion   _____ $2.75 per tin

2. ratio   _____ $\dfrac{3}{5}$

3. 3-term ratio   _____ $\dfrac{7}{50} = \dfrac{14}{100}$

4. unit price   _____ $4:3:2$

5. unit rate   _____ 27 km/h

2.1 Two-Term and Three-Term Ratios, pages 58–67

6. Use the square tile pattern to answer each question.

a) The ratio of white squares to total squares is _____ : _____.
    Write 2 equivalent ratios for this ratio.

$$\times \underline{\quad}$$

$$\dfrac{6}{12} = \dfrac{18}{\boxed{}}$$

$$\times \underline{\quad}$$

$$\div 2$$

$$\dfrac{6}{12} = \dfrac{\boxed{}}{\boxed{}}$$

$$\div 2$$

18 : _____   _____ : _____

b) Find the percent of squares that are white.
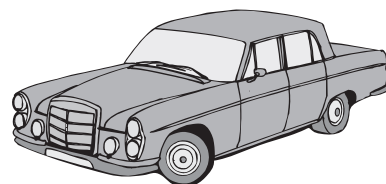
$$\dfrac{\text{white}}{\text{total}} = \dfrac{\boxed{}}{\boxed{}}$$ Change the fraction to a decimal.

$$= \underline{\qquad}$$ To change a decimal to a percent, multiply by 100.

$$= \underline{\qquad}\%$$

Name: _____ Date: _____

7. Stephanie counted 20 vehicles in a parking lot.
Five were silver, 4 were blue, 2 were red, and 1 was yellow.

a) What is the ratio of yellow to red to silver vehicles?

_____

b) What is the total number of silver, blue, red, and yellow vehicles?

Sentence: _____

c) How many vehicles are not silver, blue, red, or yellow?

Sentence: _____

d) Look at the number of each colour of vehicle. What does the ratio 4 to 20 show?

_____

e) Write the ratio of silver to total vehicles as a fraction, a decimal, and a percent.

$$\frac{silver}{total} = \frac{\boxed{}}{\boxed{}}$$ ← fraction

= _____   ← decimal

= _____   ← percent

f) Write the ratio of silver to total vehicles from part e) in lowest terms.

Name: _____ Date: _____

2.2 Rates, pages 69–76

8. Find the unit rates.

a) Stephen runs up 300 steps in 6 min.

$$\frac{300 \text{ steps}}{6 \text{ min}} = \frac{\boxed{} \text{ steps}}{1 \text{ min}}$$

$$\overset{\div 6}{\overset{\frown}{\frac{300}{6}}} = \underset{\underset{\div 6}{\smile}}{\frac{\boxed{}}{1}}$$

The unit rate is _____ steps/min.

b) $3.60 is the price of 4 L of milk.

The unit rate is _____.

9. The table compares the monthly cost of electricity for a computer and a television.

Equipment	Time On (h)	Monthly Cost ($)
Computer and monitor	120	4.26
Television	180	3.46

What is the hourly unit cost for each piece of equipment?
Round each answer to the nearest tenth of a cent.

Computer:

Unit price = $\dfrac{\text{cost}}{\text{number of hours}}$

$$= \frac{\boxed{}}{120} \qquad \boxed{\text{C}}\; 4.26 \;\boxed{\div}\; 120 = \text{?}$$

$$= \underline{\hspace{3cm}}$$

To change $ to ¢, multiply by 100.

$ \underset{(answer)}{\underline{\hspace{2.5cm}}} \times 100 = \underline{\hspace{2.5cm}}$ ¢

The unit price is _____ ¢/h.

Television:

_____

Name: _____ Date: _____

10. Groceries often cost more in Northern communities.
Use the data in the table to answer the questions.

Item	Cost in Winnipeg	Cost in Little Grand Rapids
3 kg bananas	$4.98	$13.95

a) Write the ratio of the cost of bananas in Winnipeg to the cost in Little Grand Rapids.

_____

b) Write the *rate* for the cost of 3 kg of bananas in Winnipeg.

$$\frac{\text{cost}}{\text{\# of kg}}$$

_____

c) What is the unit price for bananas in Winnipeg?

$$\frac{\text{cost}}{\text{\# of kg}} = \frac{\text{cost }(c)}{1\ \text{kg}}$$

$$\div \underline{\ \ \ \ }$$
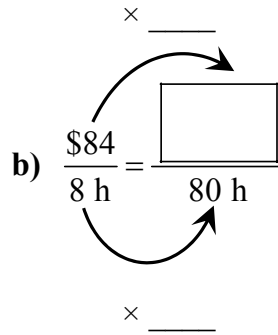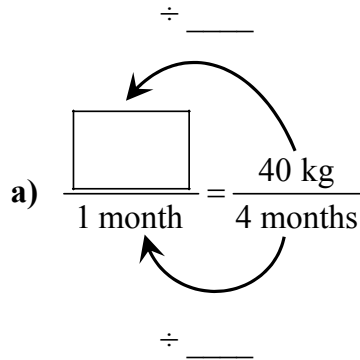
$$\frac{\boxed{}}{\boxed{}} = \frac{c}{1\ \text{kg}}$$

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

$c = $ _____

d) What is the unit price for bananas in Little Grand Rapids?
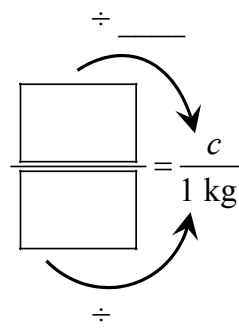
e) What is the difference in unit price for bananas for the 2 communities?

Sentence: _____

Name: _____ Date: _____

2.3 Proportional Reasoning, pages 78–86

11. Find the missing value to make equivalent rates.
Write the unit.

a)
$$\div \,\underline{\quad}$$
$$\frac{\boxed{}}{1 \text{ month}} = \frac{40 \text{ kg}}{4 \text{ months}}$$
$$\div \,\underline{\quad}$$

b)
$$\times \,\underline{\quad}$$
$$\frac{\$84}{8 \text{ h}} = \frac{\boxed{}}{80 \text{ h}}$$
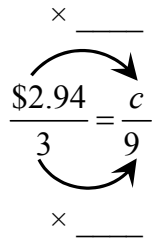$$\times \,\underline{\quad}$$

12. Use a proportion to solve each question. Use a variable for the unknown quantity.

a) Three bars of soap cost $2.94.
What is the cost of 9 bars of soap?

$$\frac{\text{cost of soap}}{3 \text{ soap}} = \frac{\text{cost of soap } (c)}{9 \text{ soap}}$$

$$\times \,\underline{\quad}$$
$$\frac{\$2.94}{3} = \frac{c}{9}$$
$$\times \,\underline{\quad}$$

$c =$ _____

_____

_____

b) On a map, 1 cm represents 200 km.
How many centimetres represent 800 km?

_____
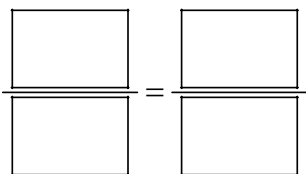
_____

Name: _____   Date: _____

13. Compare the heights of objects to their shadows.

a) A 20-m building casts a 12-m shadow.
What is the height of a tree with a shadow that is 3 m long?
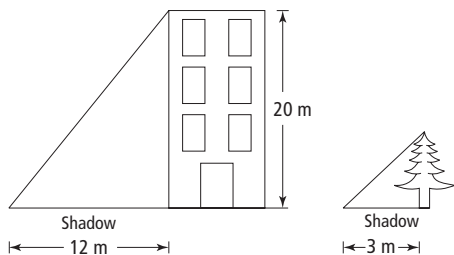
$$\frac{\text{building height}}{\text{shadow height}} = \frac{\text{tree height}}{\text{shadow height}}$$

$$\frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

Sentence: _____

b) A building with a height of 25 m has a shadow 8 m long.
What is the height of a pole with a shadow 4 m long?

Draw a diagram:

Proportion:

Sentence: _____