

Using Ratio and Proportion to Convert Measurements

These questions provide extra practice for the Skills Practice on pages 216–217.

Equivalent Ratios



1. Andrea is making a flower arrangement. The arrangement has 1 rose and 4 carnations. The ratio of roses to carnations is 1 to 4. This is commonly written 1 : 4.
 - a) Andrea adds 5 more flowers. One of the new flowers is a rose. To keep the ratio of roses to carnations the same, how many of the new flowers must be carnations? _____

$$\begin{array}{ccc}
 & \times 2 & \\
 & \curvearrowright & \\
 \frac{1 \text{ rose}}{4 \text{ carnations}} = \frac{? \text{ carnations}}{? \text{ carnations}} & & \frac{1 \text{ rose}}{4 \text{ carnations}} = \frac{2 \text{ roses}}{? \text{ carnations}} \\
 & \curvearrowleft & \\
 & \times 2 &
 \end{array}$$

- b) Write 2 equivalent ratios for the flowers in Andrea's arrangement.

3 roses : _____ carnations

4 roses : _____ carnations



Name: _____ Date: _____

SP BLM 11

(continued)

Currency

- The exchange rate between Canadian and American money varies from day to day.
- The exchange rate refers to the value of \$1 CDN when you buy money from another country.

2. On September 4, 2007, \$1 CDN was equal to about \$0.95 US.

- a)** Karissa wrote a proportion to help her calculate how many US dollars she could have gotten for \$5 CDN that day. Explain or show how Karissa could use her proportion to calculate how many US dollars she could have bought.
- $$\frac{1 \text{ CDN}}{0.95 \text{ US}} = \frac{5 \text{ CDN}}{? \text{ US}}$$

- b)** On that day, how many US dollars could Karissa have bought for \$100 CDN?

- c)** On that day, how many US dollars could Karissa have bought for \$200 CDN?

- d)** Karissa's friend from Chicago came to visit. She had \$140 US. How many Canadian dollars could she have bought on that day?



Cooking

Olive oil and vinegar are mixed together to make salad dressing.

- 3.** The ratio of vinegar to oil in a salad dressing is 1 unit vinegar : 4 units oil.
Complete the chart for the amount of oil and vinegar in the salad dressing.
Show the correct units.

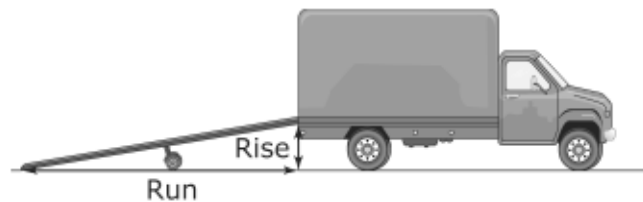
Vinegar	Oil
	4 cups
30 mL	
	300 mL
$\frac{3}{4}$ cup	
	400 mL
2 cups	

**Moving**

The ratio of the height to the horizontal length of a moving van ramp is 1 : 6.

The height is also called the "rise."

The horizontal length is also called the "run."



- 4.** Complete the chart for the rise or run of a moving van ramp with a 1 : 6 ratio. Show the correct units.

Rise	Run
	12 feet
15 in.	_____ in. = _____ ft _____ in.
	6 metres
25 centimetres	_____ cm = _____ m
_____ ft _____ in.	20 feet

