**Example 1:** Mr. Keeley is wanting the best deal to fill up his car. His gas tank holds about 60 L. He can either buy gas in Abbotsford at $1.19/L or travel across the border into the United States to fill up at $3.25/gal. Which option makes the most sense? (1 US gallon is equivalent to 3.79 L)

Canada

$\frac{\$1.19}{L} \times 60\,L = \$71.4$

US

$60\,L \times \frac{1\,gal}{3.79\,L} = 15.8\,gal$

$15.8\,gal \times \frac{\$3.25}{1\,gal} = \$51.35$

**Example 2:** Describe a situation in which each unit rate might be used. Identify and explain factors that could influence the unit rate in this situation.

a) 0.05 mg/kg

Cooking (portion control)

deli counter

prescription drugs

(b) 98.5 cents/L

gas

**Example 3:** Paula is asked to order snacks for an office meeting of 125 people. She decides to order dessert squares, which comes in boxes of 24. She estimates that she will need 2.5 squares/person. How many boxes should she buy?

$125 \times 2.5 = 312.5$

$\frac{312.5}{24} = 13.02$

**Example 4:** Amanda walks at 6 km/h and when she walks at this rate for 2 h, she burns 454 Cal. Bruce walks at 4 km/h, burning 62 Cal in 30 min. If Amanda walks for 3 h, how much longer will Bruce have to walk in order to burn the same amount of Calories?

A $\frac{454\,cal}{2\,hr} = 227\,cal/hr \times 3\,hr = 681\,Cal$

B $\frac{62\,cal}{0.5\,hr} = 124\,Cal/hr$

$\frac{681}{124} = \frac{124x}{124}$

$5.5\,hr = x$

$5.5 - 3 = 2.5\,hr$