## 4.2 Best Buy – Different Units

Sometimes it is more difficult to compare the price of items since they are in different units, such as meat which can be listed as a price per pound or per kilogram. We need to use unit conversions to be able to fairly compare the unit prices.

**Examples**

**Ex 1.** Which is the better buy:

a) 2 L of lemonade for $2.56 or 900 mL for $1.20?

→ compare both in L or mL. Pick one.

$\frac{2\text{ L}}{1} \times \frac{1000\text{ mL}}{1\text{ L}} = \frac{2000\text{ mL}}{1}$

$= 2000\text{ mL}$

$\frac{\$2.56}{2000\text{ mL}} = \$0.00128/\text{mL}$ ↑cheaper

$\frac{\$1.20}{900\text{ mL}} = \$0.00133\ldots/\text{mL}$

b) Chicken breast at $2.18/lb or $4.99/kg?

~~1 lb ≈ 2.2 kg~~ 1 kg ≈ 2.2 lbs

$2.18/lb

Already a unit price.

$\frac{\$4.99}{1\text{ kg}} = \frac{\$4.99}{2.2\text{ lbs}} \div$

$= \$2.27/\text{lb}$

c) Fencing at $23.95/m or $6.99/ft?

m → cm → ft

$\frac{1\text{ m}}{1} \times \frac{100\text{ cm}}{1\text{ m}} \times \frac{1\text{ ft}}{30.48\text{ cm}} = \frac{100\text{ ft}}{30.48} \div = 3.28\text{ ft}$

therefore → ∴ 1 m ≈ 3.28 ft

$\frac{\$23.95}{1\text{ m}} = \frac{\$23.95}{3.28\text{ ft}} \div = \$7.30/\text{ft}$

vs $6.99/ft ↑cheaper