

5.7 Converting Measures

EQ: How can you use ratios to convert between measures?

★ When converting measures, you will either multiply OR divide

★ Conversion scale - how many measures per 1 unit rate.

Example 1: $9 \text{ ft} = \overset{\div 3}{\underline{3}} \text{ yds}$

Step 1: use the conversion scale to set up a ratios table

$3 \text{ ft} = \underset{\div 3}{\underline{1}} \text{ yd}$ ← conversion scale

Step 2: multiply or divide

$9 \text{ ft} = 3 \text{ yds}$

Example 2: $5 \text{ lbs} = \underline{\hspace{2cm}} \text{ oz}$
conversion scale → $\overset{\times 5}{\uparrow} 1 \text{ lb} = 16 \text{ oz} \overset{\times 5}{\downarrow}$

$$\begin{array}{r} 316 \\ \times 5 \\ \hline 80 \end{array}$$

$16 \times 5 = 80$

$5 \text{ lbs} = 80 \text{ oz}$

Example 3:

$8 \text{ kg} = \underline{30} \text{ oz}$ $\overset{.849 \text{ kg}}{\uparrow}$

Conversions

$1 \text{ oz} \approx 28.3 \text{ g}$
 $1 \text{ kg} = 1000 \text{ g}$

$30 \text{ oz} = \underline{849} \text{ g}$ $\overset{\times 30}{\uparrow}$
 $1 \text{ oz} = 28.3 \text{ g}$ $\overset{\times 30}{\downarrow}$

$849 \text{ g} = \underline{.849} \text{ kg}$ $\overset{\div 1000}{\downarrow}$

$1000 \text{ g} = \underline{1} \text{ kg}$ $\overset{\div 1000}{\downarrow}$