

Factor Labelling

7. (metric Short)

convert $85 \frac{\text{cm}}{\text{min}}$ to $\frac{\text{m}}{\text{s}}$

$$\begin{aligned}
 ? \frac{\text{m}}{\text{s}} &= 85 \frac{\text{cm}}{\text{min}} \left(\frac{1 \text{ m}}{100 \text{ cm}} \right) \left(\frac{1 \text{ min}}{60 \text{ s}} \right) \\
 &= \frac{85}{100 \cdot 60} \frac{\text{m}}{\text{s}} \\
 &= 0.141\bar{6} \frac{\text{m}}{\text{s}} \\
 &= 0.14 \frac{\text{m}}{\text{s}}
 \end{aligned}$$

$\frac{85}{100 \cdot 60}$ $85 \div 100 \div 60$
 $85 \div (100 \cdot 60)$

Factor Label Practice Problem Set

7. 5 qts \rightarrow cm^3

$$? \text{ cm}^3 = 5 \text{ qt} \left(\frac{1 \text{ L}}{1.06 \text{ qt}} \right) \left(\frac{1000 \text{ mL}}{1 \text{ L}} \right) \left(\frac{1 \text{ cm}^3}{1 \text{ mL}} \right)$$

$\frac{5 \cdot 1000}{1.06}$

9. Convert 2.8 ha to ft^2

$$? \text{ ft}^2 = 2.8 \text{ ha} \left(\frac{2.47 \text{ acre}}{1 \text{ ha}} \right) \left(\frac{4840 \text{ yd}^2}{1 \text{ acre}} \right) \left(\frac{3 \text{ ft}}{1 \text{ yd}} \right) \left(\frac{3 \text{ ft}}{1 \text{ yd}} \right)$$

