

# Unit Conversion

To convert a measurement in one unit to an equivalent measurement in another unit set up a proportion using info from your data books and solve

Ex) 5 metres is how many yards?

$$\frac{1 \text{ yard}}{0.9144 \text{ m}} = \frac{x \text{ yards}}{5 \text{ m}}$$

$$5 \times 1 \div 0.9144 = 5.47 \text{ yards}$$

Sometimes you can not convert directly

Ex) 2000 inches is how many metres?

Plan: inches  $\rightarrow$  centimetres  $\rightarrow$  metres

$$\frac{1 \text{ inch}}{2.54 \text{ cm}} = \frac{2000 \text{ inch}}{x \text{ cm}} \quad 2.54 \times 2000 \div 1 = 5080 \text{ cm}$$

$$\frac{1 \text{ metre}}{100 \text{ cm}} = \frac{x \text{ metre}}{5080 \text{ cm}} \quad 1 \times 5080 \div 100 = 50.8 \text{ m}$$

Sometimes in the imperial system you must deal with mixed units

Ex) What is 5' 4" in centimetres?

Convert the inches into feet  $\frac{1 \text{ ft}}{12 \text{ in}} = \frac{x \text{ ft}}{4 \text{ in}} \quad 1 \times 4 \div 12 = 0.33$   
Add to whole feet 5.33 feet, convert

$$\frac{1 \text{ ft}}{30.48 \text{ cm}} = \frac{5.33 \text{ ft}}{x \text{ cm}} \quad 30.48 \times 5.33 \div 1 = 162.46 \text{ cm}$$