

3.2 CONVERSIONS

IMPERIAL to METRIC CONVERSIONS

<u>METRIC ONLY</u>			<u>IMPERIAL TO METRIC</u>		
10mm	=	1cm	1 inch	=	2.54cm
100cm	=	1m	1 foot	=	30.48cm
1000m	=	1Km	1 foot	=	0.3048m
			1 yard	=	91.44cm
			1 yard	=	0.9144m
			1 mile	=	1.609km

Example 1: "Convert 3 yard into meters"

***Whenever you convert, USE THIS PROCESS:**

$$\begin{array}{r} 3 \text{ yards} \\ \text{(what I have)} \end{array} \quad \times \quad \begin{array}{r} \text{_____ meters (what I want)} \\ \text{_____ yards (old units)} \end{array}$$

(always multiply)

ALWAYS what you WANT on the TOP, and what WAS on the bottom

How many meters are in a yard? 0.9144! – so let's add those numbers:

$$3 \text{ yards (have)} \quad \times \quad \frac{0.9144 \text{ meters (want)}}{1 \text{ yard (old)}}$$

$$3 \times 0.9144 \div 1 = 2.7432$$

2.7432m

(Multiply the top, divide the bottom)

Example 2: "Convert 62cm into feet"

$$62\text{cm (have)} \quad \times \quad \frac{\text{feet (want)}}{\text{cm (old)}}$$

How many cm are in a foot?

$$62\text{cm} \quad \times \quad \frac{1 \text{ foot}}{30.48\text{cm}}$$

$$62 \times 1 \div 30.48 = 2.034 \quad \boxed{\mathbf{2.034 \text{ feet}}}$$

Example 3: "Convert 17km into feet"

This will take TWO STEPS, since we don't have a direct conversion listed

$$17\text{km} \quad \times \quad \frac{\text{miles}}{\text{km}} \quad \times \quad \frac{\text{feet}}{\text{miles}}$$

We have this conversion **We have this conversion**

$$17\text{km} \quad \times \quad \frac{1 \text{ mile}}{1.609 \text{ km}} \quad \times \quad \frac{5280 \text{ feet}}{1 \text{ mile}}$$

$$17 \times 1 \div 1.609 \times 5280 \div 1 \quad \boxed{\mathbf{55786.2 \text{ feet}}}$$

Cop: "Do you know how fast you were going?"

Me: "55,786.2 feet per hour!"