EXPANDED CONVERSION TABLES

Revised: 13 Oct 2008

SI Metric System Conversions

Conversions SI Metric – Length and Distance		
1 kilometre km	=	1,000 metres m
1 meter m	=	100 centimetres
		cm
1 centimetre	=	10 millimetres
		mm

Conversions SI Metric – Mass			
1 tonne	=	1,000 kg	
1 kilogram kg	=	1,000 grams g	
1 gram g	=	1,000 milligrams	
		mg	

Conversions SI Metric – Volume			
1 litre 1	=	1,000 millilitres ml	
1 litre 1	=	100 centilitres cl	
1 litre l	=	1,000 cc (or 1,000	
		cm^3)	
1 millilitre ml		1 cc (or 1 cm ³)	

1 square metre $= 10,000 \text{ cm}^2$ 1 hectare $= 10,000 \text{ m}^2$ So a square 100 m by 100 m is a hectare

Conversions SI Metric – Area

'cc' stands for cubic centimetre which is really just cm³.

Notice also that a cube of dimensions 10cm by 10 cm by 10 cm is a litre

So a square 100 m by 100 m is a hectare. Used for measuring land area.

Non-SI System Conversions

Conversions Non-SI (Imperial) – Length			
1 mile mi	=	1,760 yards yd	
1 yard yd	=	3 feet ft	
1 foot ft	=	12 inches in	

Conversions Non-SI Imperial – Mass			
1 ton	=	2,000 pounds lb	
1 pound lb	=	16 ounces oz	

Conversions Non-SI Imperial –				
Volu	Volume (English)			
1 gallon	=	0.125 bushels		
1 gallon	=	160 ounces oz		
1 pint	=	0.125 gallons		
1 quart	=	0.25 gallons		
1 pint	=	0.5 quarts		

Conversions Non-SI Imperial – Volume (USA)			
1 gallon (US)	=	0.832 gallons	
		(English)	
1 gallon (US)	=	128 ounces oz	
		(US)	
Really gets confusing with two different			
volumes depending on your country!			

Caution Ounces of weight are different from ounces of volume.

Conversions Non-SI Imperial – Area			
1 acre	=	$43,560 \text{ ft}^2$	
1 acre	=	$4,840 \text{ yd}^2$	
1 foot ft	=	12 inches in	
1 square mile	=	640 acres	

So a square having sides of 208 feet would be an acre.

An acre originally was supposed to be the amount of land a horse could plow in one day, so it depended on how good your horse was!

Converting between systems

Conversions SI to Non-SI Length			
1 metre m	=	3.2808 feet ft	
1 metre m	=	39.370 inches	
		in	
1 kilometre km	=	0.6214 miles	
		mi	
2.54 cm		1 inch	

Conversions Non-SI Imperial – Mass			
1 kilogram kg	=	2.205 pounds	
		lb	
1 tonne	=	1.1 ton	

Conversions SI to Non-SI Volume			
1 gallon	=	4.546 litres	
(English)			
1 gallon (US)	=	3.785 litres	
1 gallon	=	$4,546 \text{ cc}^3$	
(English)			
1 gallon (US)	=	$3,785 \text{ cc}^3$	

Conversions SI to Non-SI Area			
1 sq mile	=	259 hectares	
1 sq mile	=	$2,589,988 \text{ m}^2$	
1 square metre	=	10.76 ft^2	
1 square metre	=	$1,550 \text{ in}^2$	
	•		

Examples:

a. To convert 3 miles to kilometres:

$$3miles = \frac{????km?}{0.6214mi} = 4.83km$$

b. Don't forget!: If the conversion factors you want aren't here you can always apply several different factors to make a complicated conversion. Example: Eg: To convert 1 ton to kilograms:

$$1 ton * \frac{2000 lk}{1 ton} * \frac{1 kg}{2.205 lk} = 907 kg$$

c. To convert square feet to square inches (notice you apply the conversion factor twice!):

$$1ft^2 = 1ft^2 * \frac{12in}{1/t} * \frac{12in}{1/t} = 144 in^2$$