

Appendix A

Conversion Factors

Conversion factors – length

	cm	m	km	inch	foot	mile
cm	1	0.01	1×10^{-5}	0.3937	0.032808	6.2137×10^{-6}
m	100	1	0.001	39.37	3.2808	6.2137×10^{-4}
km	10^5	1000	1	39370	3280.8	0.62137
inch	2.54	0.0254	2.54×10^{-5}	1	0.083333	1.5783×10^{-5}
foot	30.48	0.3048	3.048×10^{-4}	12	1	1.8939×10^{-4}
mile	1.6093×10^5	1609.3	1.6093	63360	5280	1

Example to use this table: 1 mile = 1.6093 km.

Conversion factors – area

	square meter	hectare	square km	Square foot	acre	square mile
square meter	1	10^{-4}	10^{-6}	10.764	2.4711×10^{-4}	3.861×10^{-7}
hectare	10^4	1	0.01	107639	2.4711	0.003861
square kilometer	10^6	100	1.0764×10^7	247.11	247.11	0.38610
square foot	0.092903	9.2903×10^{-6}	9.2903×10^{-4}	1	2.2957×10^{-5}	3.5870×10^{-8}
acre	4046.9	0.40469	0.0040469	43.560	1	0.0015625
square mile	2.590×10^6	259.0	2.59	2.7878×10^7	640	1

Conversion factors – volume

	Liter	m ³	ha-m	ft ³	acre-ft
liter	1	0.001	10 ⁻⁷	0.035315	8.1071 x 10 ⁻⁷
m ³	1000	1	10 ⁻⁴	35.315	8.11071 x 10 ⁻⁴
hectare meter	10 ⁷	10 ⁴	1	353147	8.1071
ft ³	28.317	0.028317	2.8317 x 10 ⁻⁶	1	2.2957 x 10 ⁻⁵
acre-foot	1233.5x10 ³	1233.5	0.12335	43560	1

Multiplying factors and their values

Name of multiplying factor	Numerical value
peta	10 ¹⁵
tera	10 ¹²
giga	10 ⁹
mega	10 ⁶
kilo	10 ³
hecto	10 ²
deca	10 ¹
deci	10 ⁻¹
centi	10 ⁻²
milli	10 ⁻³
micro	10 ⁻⁶
nano	10 ⁻⁹
pico	10 ⁻¹²
femto	10 ⁻¹⁵

Other Units

1 pound (lb) = 453.6 gm

1 ton (tonne) = 1000 kg

1 horsepower = 745.7 watt

1 nautical mile = 1.151 miles = 1.852 km

1 US gallon = 3.7854 liter

e = 2.71828

log₁₀ e = 0.43429

log e 10 = ln 10 = 2.30259