

WORKSHEET: UNIT CONVERSION PRACTISE**Reference****Base SI Units:** distance in **m** (meters), time in **s** (seconds), mass in **g** (grams), energy in **J** (Joules)

You can add any prefix to a base SI unit to modify its value.

E.g. grams (g) is the base unit; 1 kilogram (kg) is equal to 1,000 grams.

E.g. second (s) is the base unit; 1 nanosecond (ns) is equal to 0.00000001 seconds.

Prefix	Symbol (capitalization matters!)	Scientific Notation	Meaning	Example
giga-	G	10^9	1,000,000,000	1 Gm (gigameter) = 1,000,000,000 m
mega-	M	10^6	1,000,000	1 Mm (megameter) = 1,000,000 m
kilo-	k	10^3	1,000	1 km (kilometer) = 1,000 m
		10^0	1	1 meter = 1 meter
centi-	c	10^{-2}	0.01	1 cm (centimeter) = 0.01 m
milli-	m	10^{-3}	0.001	1 mm (millimeter) = 0.001 m
micro-	μ	10^{-6}	0.000001	1 μ m 1 micrometer = 0.000001 m
nano-	n	10^{-9}	0.000000001	1 nm = 1 nanometer = 0.000000001 m

Time Units: 60 s = 1 min 60 min = 1 hr 24 hr = 1 day 365 days = 1 yr**Energy Units:** 1 Calories = 4184 J (Joules)**Mass Units:** 1 pound = 0.454 kg**Length Units:** 1 inches = 2.54 cm 12 inches = 1 foot 1 miles = 1.61 km*Convert the following to the desired unit.*

- | | |
|-----------------------------|-----------------------------------|
| a) 3.2 km = _____ m | t) 230 s = _____ min |
| b) 38,942 m = _____ km | u) 490 Calories = _____ J |
| c) 489 g = _____ kg | v) 289 inches = _____ feet |
| d) 0.43 kg = _____ g | w) 68 miles = _____ km |
| e) 2800 ms = _____ s | x) 3.2 kg = _____ pounds |
| f) 28 cm = _____ m | y) 5882 s = _____ min |
| g) 5,890 mm = _____ cm | z) 823 mm = _____ inches |
| h) 290 g = _____ kg | aa) 37895 s = _____ hr |
| i) 8,918 J = _____ kJ | bb) 2.3 kJ = _____ Calories |
| j) 2.3 cm = _____ m | cc) 289,058 ms = _____ min |
| k) 89 cg = _____ g | dd) 5,890 inches = _____ m |
| l) 23,000 μ m = _____ m | ee) 223 g = _____ pounds |
| m) 889,290 g = _____ Mg | ff) 0.02 mm = _____ μ m |
| n) 389 ms = _____ s | gg) 70 inches = _____ cm |
| o) 2.8 μ m = _____ nm | hh) 1.5 year = _____ s |
| p) 732 nm = _____ μ m | ii) 35 miles/hour = _____ km/hour |
| q) 0.0014 km = _____ cm | jj) 1200 km/hour = _____ km/min |
| r) 180 mm = _____ μ m | kk) 59 m/s = _____ km/hour |
| s) 0.0002 kg = _____ mg | ll) 44.72 km/h = _____ m/s |