

Reference: Measurements of the same size

Commonly-used metric prefixes in physics: kilo- (k), centi- (c), milli- (m), micro- (μ or u)

In each box below, all the listed measurements are the same size. You can use these lists to construct any conversion factors you might need.

Basic metric:

1 kilo _____ =
1,000 _____ =
100,000 centi _____ =
1,000,000 milli _____ =
1,000,000,000 micro _____

0.001 kilo _____ =
1 _____ =
100 centi _____ =
1,000 milli _____ =
1,000,000 micro _____

0.00001 kilo _____ =
0.01 _____ =
1 centi _____ =
10 milli _____ =
10,000 micro _____

0.000001 kilo _____ =
0.001 _____ =
0.1 centi _____ =
1 milli _____ =
1,000 micro _____

Time:

1 min =
60 s

1 hr =
60 min

1 day =
24 hr

1 year =
365.24 days

Miscellaneous:

1 mile =
1.61 km

1 inch =
2.54 cm

1 kg =
2.20 lbs

1 light year =
 9.46×10^{12} km =
 9.46×10^{15} m

1 Astronomical Unit =
 93.0×10^6 miles =
 150×10^6 km

* In the “basic metric” boxes you can put ANY UNIT in the blank! “Meter”, “liter”, “gram”, etc..

The base SI units are: meter, kilogram, and second. Units like Newtons and Joules are based on these. So, if you're ever in doubt about units working out, just convert everything to base units and it will be OK!