

Measurement Conversions

Prefixes in the metric system have consistent meanings.

Prefix	Meaning
Milli-	One thousandth
Centi-	One hundredth
Deci-	Tenth
Deka-	Ten
Hecto-	One hundred
Kilo-	One thousand

Benchmarks

It is sometimes helpful to relate measurement amounts to everyday items. Try the following benchmarks to help you remember the size of each measurement.

Metric –

Centimeter – about the width of your pinky finger

Centimeter – about the width of a small paper clip

Millimeter – about the thickness of a dime

Meter – about the height of a standard doorknob

Customary –

Inch – about the length of a small paper clip

Inch – about the distance between the last knuckle and the tip of your pointer finger

Foot – a little taller than a 3-ring binder

Yard – about the height of a stool

Metric Units

Length

1 millimeter (mm) = 0.001 meter (m)

1 centimeter (cm) = 0.01 meter

1 decimeter (dm) = 0.1 meter

1 dekameter (dam) = 10 meters

1 hectometer (hm) = 100 meters

1 kilometer (km) = 1,000 meters

Mass/Weight

1 milligram (mg) = 0.001 gram (g)

1 centigram (cg) = 0.01 gram

1 decigram (dg) = 0.1 gram

1 dekagram (dag) = 10 grams

1 hectogram (hg) = 100 grams

1 kilogram (kg) = 1,000 grams

1 metric ton (t) = 1,000 kilograms

Capacity

1 milliliter (mL) = 0.001 liter (L)

1 centiliter (cL) = 0.01 liter

1 deciliter (dL) = 0.1 liter

1 dekaliter (daL) = 10 liters

1 hectoliter (hL) = 100 liters

1 kiloliter (kL) = 1,000 liters

Area

1 square centimeter (cm²) = 100 square millimeters (mm²)

1 square meter (m²) = 10,000 square centimeters

1 hectare (ha) = 10,000 square meters

1 square kilometer (km²) = 1,000,000 square meters

Customary Units

Length

1 foot (ft) = 12 inches (in)

1 yard (yd) = 36 inches

1 yard = 3 feet

1 mile (mi) = 5,280 feet

1 mile = 1,760 yards

Weight

1 pound (lb) = 16 ounces (oz)

1 ton (T) = 2,000 pounds

Capacity

1 cup (c) = 8 fluid ounces (fl oz)

1 pint (pt) = 2 cups

1 quart (qt) = 2 pints

1 quart (qt) = 4 cups

1 gallon (gal) = 4 quarts

Area

1 square foot (ft²) = 144 square inches (in²)

1 square yard (yd²) = 9 square feet

1 acre = 43,560 square feet

1 square mile (mi²) = 640 acres

Time

1 minute (min) = 60 seconds (s)

1 hour (h) = 60 minutes

1 day (d) = 24 hours

1 week (wk) = 7 days
1 year (y) = 12 months (mo)
1 year = 52 weeks
1 year = 365 days
1 decade = 10 years
1 century (c) = 100 years
1 millennium = 1,000 years

Customary/Metric Conversions

1 inch = 25.4 millimeters
1 inch = 2.54 centimeters
1 lb \approx 0.4536 kg
1 kg \approx 2.205 lb
1 foot = 0.3048 meter
1 millimeter = 0.0394 inch
1 yard = 0.914 meter
1 centimeter = 0.3937 inch
1 mile = 1.609 kilometers
1 meter = 3.2808 feet
1 kilometer = 0.621 mile