

Conversion Factors¹

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Mass (Weights)

1 U.S. ton = 2,000 lbs = 0.97 metric tons

1 lb = 16 oz = 453.6 g = 0.4356 kg

1 oz = 28.35 g

Velocity

1 mph = 5,280 ft/hr = 88 ft/min = 1.467 ft/sec

1 m/sec = 196.85 ft/min = 2.24 mph

1 m/sec = 1.942 knots

Area

1 sq mile = 640 A

1/4 mi x 1/4 mi = 40 A

1,320 ft x 1,320 ft = 40A

1 A = 43,560 sq ft = 0.405 ha

1 ha = 2.47A = 10,000 m²

1 yd² = 9 ft² = 0.836 m²

1 ft² = 144 in² = 0.09 m²

1 cm² = 0.155 in²

#A = [length (ft) x width (ft)] ÷ 43,560 ft²

Pressure

1 atm = 14.7 psi = 406.8 inches H₂O @ 40 °F

1 atm = 29.92 inches Hg @ 40 °F = 760 mm Hg @ 4 °C

1 atm = 1.01325 bar

1 psi = 27.68 inches H₂O @ 40 °F = 144 lb/ft² = 703.06 kg/m² @ 4 °C²

1 psi = 6.8948 x 10³ pascals = 6.895 Kpa = 2.036 inches Hg

1 psi = 70.3 g per cm²

1 pascal = 10 dynes/cm² = 1.45 x 10⁻⁴ psi

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Temperature

$$^{\circ}\text{F} = (9/5 \text{ } ^{\circ}\text{C}) + 32$$

$$^{\circ}\text{C} = 5/9 (\text{ } ^{\circ}\text{F} - 32)$$

$$^{\circ}\text{K} = ^{\circ}\text{C} + 273.16$$

$$^{\circ}\text{R} = ^{\circ}\text{F} + 459.69$$

Length

$$1 \text{ mi} = 5,280 \text{ ft} = 1.6093 \text{ km}$$

$$1 \text{ yd} = 3 \text{ ft} = 36 \text{ in} = 91.44 \text{ cm}$$

$$1 \text{ ft} = 12 \text{ in} = 30.48 \text{ cm}$$

$$1 \text{ in} = 2.54 \text{ cm}$$

Liquid

$$1 \text{ gal} = 231 \text{ in}^3 = 4 \text{ qt} = 8 \text{ pt} = 16 \text{ C} = 8.4 \text{ lb (water)}$$

$$1 \text{ qt} = 2 \text{ pt} = 4 \text{ C} = 32 \text{ fl oz} = 0.946 \text{ L} = 946 \text{ ml}$$

$$1 \text{ pt} = 2 \text{ C} = 16 \text{ fl oz} = 0.473 \text{ L} = 473 \text{ ml} = 32 \text{ tbsp}$$

$$1 \text{ C} = 8 \text{ oz} = 0.24 \text{ L} = 240 \text{ ml} = 0.5 \text{ pt} = 16 \text{ tbsp}$$

$$1 \text{ fl oz} = 2 \text{ tbsp} = 6 \text{ tsp} = 1.8 \text{ in}^3 = 0.02957 \text{ L} = 29.57 \text{ ml}$$

$$1 \text{ tbsp} = 3 \text{ tsp} = 0.5 \text{ oz} = 14.78 \text{ ml}$$

$$1 \text{ tsp} = 0.166 \text{ oz} = 4.92 \text{ ml}$$

$$1 \text{ ml} = 0.0338 \text{ fl oz} = 1 \text{ cc}$$

Commodity Weights

$$1 \text{ bu barley} = 48 \text{ lbs}$$

$$1 \text{ bu corn} = 56 \text{ lbs}$$

$$1 \text{ bu cotton} = 32 \text{ lbs}$$

$$1 \text{ bu cotton bale} = 480 \text{ lbs}$$

$$1 \text{ bu cowpeas} = 60 \text{ lbs}$$

$$1 \text{ bu crimson clover} = 60 \text{ lbs}$$

$$1 \text{ bu oat and fescue} = 32 \text{ lbs}$$

$$1 \text{ bu rye} = 56 \text{ lbs}$$

$$1 \text{ bu sorghum, forage} = 50 \text{ lbs}$$

$$1 \text{ bu sorghum, grain} = 56 \text{ lbs}$$

$$1 \text{ bu soybeans} = 60 \text{ lbs}$$

Abbreviations (in alphabetical order)

A = acre

atm = atmospheres

bu = bushel

C = cups

$^{\circ}\text{C}$ = Degrees Celcius

cc = cubic centimeters

cm = centimeter

cm^2 = square centimeters

$^{\circ}\text{F}$ = Degrees Fahrenheit

fl oz = fluid ounces

ft = foot

ft^2 = square feet

g = gram

gal = gallon

ha = hectare

Hg = mercury

hr = hour

in = inch

in^2 = square inches

in^3 = cubic inches

$^{\circ}\text{K}$ = Degrees Kelvin

kg = kilogram

km = kilometer

Kpa = kilopascals

L = liter

lb = pound

m = meter

m² = square meters

mi = mile

min = minute

ml = milliliter

mm = millimeter

mph = miles per hour

oz = ounce

psi = pounds per square inch

pt = pint

qt = quart

°R = Degrees Rankin

sec = second

sq = square

tbsp = tablespoon

tsp = teaspoon

yd = yard

yd² = square yards