

WEIGHTS AND MEASUREMENTS

UNITED STATES UNITS

ANGULAR & CIRCULAR MEASURE

60 seconds = 1 minute
60 minutes = 1 degree
90 degrees = 1 right angle
180 degrees = 1 straight angle
360 degrees = 1 circle

APOTHECARIES' FLUID MEASURE

60 minims = 1 fluid dram
8 fluid drams = 1 fluid ounce
16 fluid ounces = 1 pint
2 pints = 1 quart
4 quarts = 1 gallon

APOTHECARIES' WEIGHT

20 grains = 1 scruple
3 scruples = 1 dram
8 drams = 1 ounce
12 ounces = 1 pound

AVOIRDUPOIS WEIGHT

27 $\frac{11}{32}$ grains = 1 dram
16 drams = 1 ounce
16 ounces = 1 pound
100 pounds = 1 short hundredweight
20 short hundredweights = 1 short ton

CUBIC MEASURE

1728 cubic inches = 1 cubic foot
27 cubic feet = 1 cubic yard

DRY MEASURE

2 pints = 1 quart
8 quarts = 1 peck
4 pecks = 1 bushel

LINEAR MEASURE

12 inches = 1 foot
3 feet = 1 yard
5 $\frac{1}{2}$ yards = 1 rod
40 rods = 1 furlong
8 furlongs (5280 ft.) = 1 statute mile

LIQUID MEASURE

4 gills = 1 pint
2 pints = 1 quart
4 quarts = 1 gallon
31 $\frac{1}{2}$ gallons = 1 barrel
2 barrels = 1 hogshead

MARINERS' MEASURE

6 feet = 1 fathom
1000 fathoms (approx.) = 1 nautical mile
3 nautical miles = 1 league

SQUARE MEASURE

144 square inches = 1 square foot
9 square feet = 1 square yard
30 $\frac{1}{4}$ square yards = 1 square rod
160 square rods = 1 acre
640 acres = 1 square mile

SURVEYORS' MEASURE

7.92 inches = 1 link
100 links = 1 chain

TIME MEASURE

60 seconds = 1 minute
60 minutes = 1 hour
24 hours = 1 day
7 days = 1 week
4 weeks (28 to 31 days) = 1 month
12 months (365 to 366 days) = 1 year
100 years = 1 century

TROY WEIGHT

24 grains = 1 pennyweight
20 pennyweights = 1 ounce
12 ounces = 1 pound

WOOD MEASURE

16 cubic feet = 1 cord foot
8 cord feet = 1 cord

WEIGHTS AND MEASUREMENTS

QUICK METRIC CONVERSIONS

AREA

- 1 square inch = 6.6 square centimeters
- 1 square foot = 0.09 square meter
- 1 square yard = 0.8 square meter
- 1 square mile = 2.6 square kilometers
- 1 acre = 0.4 hectare

LENGTH

- 1 inch = 2.54 centimeters
- 1 foot (12 inches) = 0.3 meter or 30 centimeters
- 1 yard (3 feet) = 0.9 meter or 90 centimeters
- 1 mile (1,760 yards) = 1.6 kilometers or 1600 meters

MASS

- 1 ounce = 28 grams
- 1 pound (16 ounces) = .45 kilogram or 450 grams

SPEED

- 18 m.p.h. = approx. 25 km/h
- 30 m.p.h. = approx. 50 km/h
- 50 m.p.h. = approx. 80 km/h
- 60 m.p.h. = approx. 100 km/h

VOLUME

- 1 fluid ounce = 28 milliliters
- 1 pint (20 ounces) = 0.57 liter or 570 milliliters
- 1 quart (2 pints) = 1.14 liters or 1140 milliliters
- 1 gallon (4 quarts) = 4.5 liters or 4500 milliliters
- 1 U.S. gallon = 3.78 liters or 3780 milliliters

OFTEN-USED FORMULAS

- To convert Celsius into Fahrenheit: Multiply Celsius degrees by 9, divide by 5, add 32
- To convert Fahrenheit into Celsius: Subtract 32 from degrees of Fahrenheit and multiply by 5, then divide by 9
- Circumference of a circle: Multiply diameter by 3.14
- Area of a triangle: Multiply base by 1/2 perpendicular height
- Area of a rectangle: Multiply length by width.

METRIC UNITS

CUBIC MEASURE

- 1000 cubic millimeters = 1 cubic centimeter
- 1000 cubic centimeters = 1 cubic decimeter
- 1000 cubic decimeters = 1 cubic meter

LINEAR MEASURE

- 10 millimeters = 1 centimeter
- 10 centimeters = 1 decimeter
- 10 decimeters = 1 meter
- 10 meters = 1 decameter
- 10 decameters = 1 hectometer
- 10 hectometers = 1 kilometer

LIQUID MEASURE

- 10 milliliters = 1 centiliter
- 10 centiliters = 1 deciliter
- 10 deciliters = 1 liter
- 10 liters = 1 decaliter
- 10 decaliters = 1 hectoliter
- 10 hectoliters = 1 kiloliter

SQUARE MEASURE

- 100 square millimeters = 1 square centimeter
- 100 square centimeters = 1 square decimeter
- 100 square decimeters = 1 square meter
- 100 square meters = 1 square decameter
- 100 square decameters = 1 square hectometer
- 100 square hectometers = 1 square kilometer

WEIGHTS

- 10 milligrams = 1 centigram
- 10 centigrams = 1 decigram
- 10 decigrams = 1 gram
- 10 grams = 1 decagram
- 10 decagrams = 1 hectogram
- 10 hectograms = 1 kilogram
- 10 kilograms = 1 myriagram
- 10 myriagrams = 1 quintal
- 10 quintals = 1 metric ton