KELVIN

Units Guide

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Acceleration

Centimeter per second squared — cm/s^2

Foot per second squared — ft/s^2

Free fall — gn

The ideal falling motion of a body that is subject only to the earth's gravitational field.

Gal — Gal

A unit of gravitational acceleration equal to one centimeter per second per second (named after Galileo).

Meter per second squared — m/s^2

Millimeter per second squared — mm/s^2

Angle

Centesimal minute

One hundredth of a grade, 0.01 grade.

Centesimal second

One ten-thousandth of a grade, 0.0001 grade.

Degree — º

1/360 of a complete revolution.

Grad/grade/gon

One-hundredth of a right angle.

Mil

Used in artillery; 1/6400 of a complete revolution.

Milliradian — mrad

A unit of angular distance equal to one thousandth of a radian.

Minute — '

The sixtieth part of a degree; sixty seconds (Marked thus ''); as, 10deg 20''.

Octant

The eighth part of a circle (an arc of 45 degrees).

Point

1/32 of a circle. Points are used on the face of a compass (32 points). Each point is labelled clockwise starting from North as follows: North, North by East, North Northeast, Northeast by North, and Northeast, etc.

Quadrant

The fourth part of a circle (an arc of 90 degrees).

Radian — rad

An arc of a circle which is equal in length to the radius, or the angle measured by such an arc.

Revolution/circle/perigon/turn — r

The act of revolving, or turning round on an axis or a center; the motion of a body round a fixed point or line; rotation; as, the revolution of a wheel, of a top, of the earth on its axis, etc.

Right angle

The angle formed by one line meeting another perpendicularly.

Second — ''

One sixtieth of a minute (marked thus (''); as, 10 deg 20' 30'').

Sextant

The sixth part of a circle (an arc of 60 degrees).

Sign

The twelfth part of a circle as in twelve signs of the zodiac (an arc of 30 degrees).

Angular Velocity / Frequency

Hexahertz — EHz

10^{i8} hertz.

Gigahertz — GHz

One billion hertz.

Hertz — Hz

Named after the German physicist Heinrich Hertz (1857-1894) who was the first to produce electromagnetic waves artificially. Having a periodic interval of one second.

Kilohertz — kHz

One thousand hertz.

Kiloradian per second — krad/s

One thousand radians per second.

Megahertz — MHz

One million hertz.

Milliradian per second — mrad/s

Petahertz — PHz

10^{i5} Hertz.

Radian per second — rad/s

The radian per second is defined as the change in the orientation of an object, in radians, every second. 2π radians per second is exactly 1 hertz.

Revolution per day — rpd

Revolution per hour — rph

Revolution per minute — rpm

Revolution per second — rev/s

Terahertz — THz

10^{i2} hertz.

Area

Acaena (Greek)

Acre

A piece of land, containing 160 square rods, or 4,840 square yards, or 43,560 square feet. This is the English statute acre. That of the United States is the same. The Scotch acre was about 1.26 of the English, and the Irish 1.62 of the English.

Note: The acre was limited to its present definite quantity by statutes of Edward I., Edward III., and Henry VIII.

Acre (Chesire)

Acre (Irish)

Acre (Scotish)

Are

The unit of superficial measure, being a square of which each side is ten meters in length; 100 square meters, or about 119.6 square yards.

Arpent (French)

4,088 sq. yards, or nearly five sixths of an English acre.

Arpent (woodland)

1 acre, 1 rood, 1 perch.

Barn

Used in Nuclear physics to describe the apparent cross-sectional size of atomic sized objects that are bombarded with smaller objects (like electrons). 10^{-28} square meters. 100 square femtometers. Originated from the semi-humorous idiom big as a barn and used by physicists to describe the size of the scattering object (Ex: That was as big as 5 barns!).

Barony

Centimeter diameter circle

Cho

Japanese. 2.45 acre.

Circular inch

Circular mil cmil

Cuadra (Paraguay)

Desyatina/dessiatina

Russian. 2.6996 acre. 2400 square sadzhens.

Donum (Yugoslavia)

Fall (Scotish)

Ferfet (Iceland)

Flag

Square pace (a pace is 5 feet).

Foot diameter circle

Hectare

A measure of area, or superficies, containing a hundred ares, or 10,000 square meters, and equivalent to 2.471 acres.

Hide/carucate

An ancient English measure of the amount of land required to support family.

Homestad/quarter section

160 acres,1/4 square mile, or 1/4 section Use by the governments of North America early settlers in the western states and provinces were allowed to take title to a homestead of 160 acres of land by registering a claim, settling on the land, and cultivating it.

Inch diameter circle

Joch (German)/yoke

joch (German) is 40 square klafters.

Labor (Texas)

An area of land that could be cultivated by one farmer.

Link

4 rods square.

Meter diameter circle

Perch

Used to measure land. A square rod; the 160th part of an acre.

Plethron (Greek)

Roll (wallpaper)

Rood

The fourth part of an acre, or forty square rods.

Sabin

A unit of acoustic absorption equivalent to the absorption by a square foot of a surface that absorbs all incident sound. $1ft^2$.

Sahme (Egyptian)

Section

Used in land measuring. One square mile. An area of about 640 acres.

Shaku

A Japanese unit of area, the shaku equals 330.6 square centimeters (51.24 square inches).

Note: shaku also means length and volume.

Square

Used in the construction for measuring roofing material, finished lumber, and other building materials. One square is equals 100 square feet.

Square Scotish ell

Square alen (Denmark)

Square centimeter cm^2

Square chain (surveyor)

A unit for land measure equal to four rods square, or one tenth of an acre.

Square foot ft^2

An area equal to that of a square the sides of which are twelve inches; 144 square inches.

Square inch in^2

A unit of area equal to one inch by one inch square syn: sq in.

Square kilometer km^2

Square league (land)

Square meter m^2

Also know as a centare is (1/100th of an are).

Square micrometer μ^2

Square mil mil^2

Square mile mi^2

Square millimeter mm^2

Square pes (Roman)

Square rod rd^2

Square vara (Spanish)

Square yard

yd^2

A unit of area equal to one yard by one yard square. Synoym: sq yd.

Tavola (Italian)

Township

A division of territory six miles square (36miles^2), containing 36 sections.

Atomic Physics

GeV Giga electronvolt — GeV

MeV Mega electronvolt — MeV

Rydberg constant

Named after the Swedish physicist Johannes Robert Rydberg (1854-1919). A wave number characteristic of the wave spectrum of each element.

Atomic mass unit — amu

Electron rest mass

Electronvolt — eV

A unit of energy equal to the work done by an electron accelerated through a potential difference of 1 volt.

Erg

The unit of work or energy in the C. G. S. system, being the amount of work done by a dyne working through a distance of one centimeter; the amount of energy expended in moving a body one centimeter against a force of one dyne. One foot pound is equal to 13,560,000 ergs.

Hertz — Hz

Joule — J

Named after the English physicist James Prescott Joule (1818-1889). A unit of work which is equal to 10^7 units of work in the C. G. S. system of units (ergs), and is practically equivalent to the energy expended in one second by an electric current of one ampere in a resistance of one ohm. One joule is approximately equal to 0.738 foot pounds.

Kayser or cm^{-1} — K

Named after the German physicist Heinrich Gustav Johannes Kayser (1853-1940). Used to measure light and other electromagnetic waves. The "wave number" in kaysers equals the number of wavelengths per centimeter.

Kelvin — K

The basic unit of thermodynamic temperature adopted under Le Système international d'unités

Kilogram — kg

m^{-1}

Millikayser

Neutron mass unit

Proton mass unit

Radian per second — rad/s

Computer Data

Bit

Acronym of BInary digiT.

Byte

The byte is a unit of digital information in computing and telecommunications that most commonly consists of eight bits. Historically, a byte was the number of bits used to encode a single character of text in a computer and for this reason it is the basic addressable element in many computer architectures.

Character

Usually described by one byte (256 possible characters can be defined by one byte).

Exabyte/exbi E/Ei

2^{60}, 1024^{6}, 1024 petabytes. 1024 comes from 2^{i0} which is close enough to 1000. Tebi is the IEEE proposal.

Gigabyte/gibi G/Gi

2^{30}, 1024^{3}. 1024 megabytes. 1024 comes from 2^{10} which is close enough to 1000. Gibi is the IEEE proposal.

Kilobit kilobit

2^{i0} bits.

Kilobyte/kibi K/Ki

2^{i0}, 1024 bytes. 1024 comes from 2^{10} which is close enough to 1000. Kibi is the IEEE proposal.

Megabit megabit

2^{20} bits.

Megabyte/mebi M/Mi

2^{20}, 1024^{2} bytes. 1024 kilobytes. 1024 comes from 2^{10} which is close enough to 1000.Mebi is the IEEE proposal.

Nibble/hexit/quadbit

One half a byte.

Petabyte/pebi P/Pi

2^{50}, 1024^{5}. 1024 terabytes. 1024 comes from 2^{10} which is close enough to 1000. Tebi is the IEEE proposal.

Terabyte T/Ti

2^{40}, 1024^{4}. 1024 gigabytes. 1024 comes from 2^{10} which is close enough to 1000. Tebi is the IEEE proposal.

Yobi/yottabyte Yi

1024^{8}. 1024 yobibytes. 1024 comes from 2^{10} which is close enough to 1000. Tebi is the IEEE proposal.

Zebi/zettabyte Zi

1024^{7}. 1024 exbibytes. 1024 comes from 2^{10} which is close enough to 1000. Tebi is the IEEE proposal.

Computer Data Flow Rate

Baud:1

Symbol rate for 1 bit per symbol. Named after the French telegraph engineer Jean-Maurice-Émile Baudot (1845 – 1903). Data transmission measured in symbols per second.

Baud:4

Symbol rate for 4 bit per symbol. Named after the French telegraph engineer Jean-Maurice-Émile Baudot (1845 - 1903). Data transmission measured in symbols per second.

Baud:8

Symbol rate for 8 bit per symbol. Named after the French telegraph engineer Jean-Maurice-Émile Baudot (1845 - 1903). Data transmission measured in symbols per second.

Baud:10

Symbol rate for 10 bit per symbol. Named after the French telegraph engineer Jean-Maurice-Émile Baudot (1845 - 1903). Data transmission measured in symbols per second.

Bits per second bps

Characters per second cps

Rate to transmit one character. The character is usually described as one byte with one stop bit and one start bit (10 bits in total).

Computer numbers

Base 2 binary

Base two numbering system using the digits 0-1.

Base 3 ternary/trinary

Base three numbering system using the digits 0-2. Russian Nikolay Brusentsov built a trinary based computer system.

Base 4 quaternary/quadrary

Base four numbering system using the digits 0-3.

Base 5 quinary

Base five numbering system using the digits 0-4.

Base 6 senary/hexary

Base six numbering system using the digits 0-5.

Base 7 septenary/septary

Base seven numbering system using the digits 0-6.

Base 8 octonary/octal/octonal/octimal

Base eight numbering system using the digits 0-7. Commonly used in older computer systems.

Base 9 nonary

Base nine numbering system using the digits 0-8.

Base 10 decimal

Base ten numbering system using the digits 0-9.

Base 11 undenary

Base eleven numbering system using the digits 0-9, A.

Base 12 duodecimal

Base twelve numbering system using the digits 0-9, A-B.

Base 13 tridecimal

Base Thirteen numbering system using the digits 0-9, A-C.

Base 14 quattuordecimal

Base Fourteen numbering system using the digits 0-9, A-D.

Base 15 quindecimal

Base Fifteen numbering system using the digits 0-9, A-E.

Base 16 sexadecimal/hexadecimal/hex

Base Sixteen numbering system using the digits 0-1, A-F. Commonly used in computer systems.

Base 17 septendecimal

Base Sixteen numbering system using the digits 0-1, A-G.

Base 18 octodecimal

Base Sixteen numbering system using the digits 0-1, A-H.

Base 19 nonadecimal

Base Sixteen numbering system using the digits 0-1, A-I.

Base 20 vigesimal

Base Twenty numbering system using the digits 0-1, A-J.

Base 30 trigesimal

Base Thirty numbering system using the digits 0-9, A-T.

Base 36 hexatrigesimal

Base Thirty-six numbering system using the digits 0-9, A-Z.

Base 40 quadragesimal

Base Fifty digits numbering system using the digits 0-1, A-Z, a-d.

Base 50 quinquagesimal

Base Fifty digits numbering system using the digits 0-1, A-Z, a-n.

Base 60 sexagesimal

Base Sixty numbering system using the digits 0-9, A-Z, a-x.

Base 62 deuosexagesimal

Base Sixty-two numbering system using the digits 0-9, A-Z, a-z. This is the highest numbering system that can be represented with all decimal numbers and lower and upper case English alphabet characters. Other number systems include septagesimal (base 70), octagesimal (base 80), nonagesimal (base 90), centimal (base 100), bicentimal (base 200), tercentimal (base 300), quattrocentimal (base 400), quincentimal (base 500).

Currrent Loop

4 to 20 mA mA

This range of current is commonly used in instrumentation. 0mA is an indication of a broken transmitter loop.

6400 to 32000 counts

Many PLCs must scale the 4 to 20 mA signal to an integer, this is commonly a value from 6400 to 32000,

V across 250 ohm V

A common resistance for current loop instrumentation is 250 ohms. A voltage will be developed across this resistor, that voltage can be used to test the current loop.

Percent %

This is a percentage of the 4 to 20mA signal.

Density

Aluminum	Al
Copper	Cu
Gold	Au
Gram per cubic centimeter	g/cm^3
Gram per cubic meter	g/m^3
Iron	Fe
Kilogram per cubic cm	kg/cm^3

The unit of work or energy in the C. G. S. system, being the amount of work done by a dyne working through a distance of one centimeter; the amount of energy expended in moving a body one centimeter against a force of one dyne. One foot pound is equal to 13,560,000 ergs.

Kilogram per cubic meter	kg/m^3
Kilogram per liter	kg/l
Lead	Pb
Metric ton per cubic meter	metric ton/m^3
Milligram per cubic meter	mg/m^3
Ounces per gallon (UK)	oz/gal
Ounces per gallon (US)	oz/gal
Pound mass per gallon (UK)	lbm/gal
Pounds mass per UK liquid gallon.	
Pound mass per gallon (US)	lbm/gal
Pounds mass per US liquid gallon.	
Pound per cubic foot	lbm/ft^3
Pounds mass per cubic foot.	
Pound per cubic inch	lbm/in^3
Pounds mass per cubic inch.	
Silver	Ag
Slug per cubic feet	$slug/ft^3$
Ton (UK/long) per cubic foot	ton/ft^3
Ton (UK/long) per cubic yard	ton/yd^3
Ton (US/short) per cubic foot	ton/ft^3
Ton (US/short) per cubic yard	ton/yd^3
Water at 4 degrees	
Water weights 1 gram per cm^3.	

Electrical Capacitance

Abfarad abF

The abfarad (abbreviated abF) is an obsolete CGS unit of capacitance equal to 109 farads (1 gigafarad, GF). This very large unit is used in medical terminology only.

Farad F

Named after the English electrician Michael Faraday. The standard unit of electrical capacity. The capacity of a condenser whose charge, having an electro-motive force of one volt, is equal to the amount of electricity which, with the same electromotive force, passes through one ohm in one second. The capacity, which, charged with one coulomb, gives an electro-motive force of one volt.

Microfarad μF

Nanofarad nF

Picofarad pF

Second/ohm

Statfarad

Electrical Charge

Abcoulomb abC/aC

The abcoulomb (abC or aC) or electromagnetic unit of charge (emu of charge), is the basic physical unit of electric charge in the cgs-emu system of units. One abcoulomb is equal to ten coulombs.

Ampere-hour Ah/AHr/A·h/A h

An ampere-hour or amp-hour is a unit of electric charge, with sub-units milliampere-hour (mAh) and milliampere second (mAs). One ampere-hour is equal to 3600 coulombs. The ampere-hour is frequently used in measurements of electrochemical systems such as electroplating and electrical batteries.

Coulom (Weber) C

Named after the French physicist and electrican Coulomb. (Physics) The standard unit of quantity in electrical measurements. It is the quantity of electricity conveyed in one second by the current produced by an electro-motive force of one volt acting in a circuit having a resistance of one ohm, or the quantity transferred by one ampère in one second. Formerly called weber.

Electron charge

Faraday F

Named after Michael Faraday the The English physicist and chemist who discovered electromagnetic induction (1791-1867). The amount of electric charge that liberates one gram equivalent of any ion from an electrolytic solution.

Kilocoulomb kC

Microcoulomb μC

Nanocoulomb nC

Statcoulomb sC/statC/Fr/esu

The statcoulomb (statC) or franklin (Fr) or electrostatic unit of charge (esu) is the physical unit for electrical charge used in the centimetre-gram-second system of units (cgs) and Gaussian units.

Electrical Current

Abampere Aa/Biot/abA

The abampere (aA), also called the biot after Jean-Baptiste Biot, is the basic electromagnetic unit of electric current in the emu-cgs system of units (electromagnetic cgs). One abampere is equal to ten amperes in the SI system of units. An abampere of current in a circular path of one centimeter radius produces a magnetic field of 2 π oersteds at the center of the circle.

Ampere A

The unit of electric current; defined by the International Electrical Congress in 1893 and by U. S. Statute as, one tenth of the unit of current of the C. G. S. system of electro-magnetic units, or the practical equivalent of the unvarying current which, when passed through a standard solution of nitrate of silver in water, deposits silver at the rate of 0.001118 grams per second. It is named after André-Marie Ampère (1775-1836), French mathematician and physicist, considered the father of electrodynamics.

Coulomb per second

The ampere is equal to Coulomb per second, which is a measure of the amount of electric charge passing a point in an electric circuit per unit time which is equivalent to 6.241 x 10^{18} electrons per second.

Kiloampere kA

Microampere μA

Milliampere mA

Nanoampere nA

Picoampere pA

Statampere

The ESU unit of charge, franklin (Fr), also known as statcoulomb or esu charge, is therefore defined as: two equal point charges spaced 1 centimetre apart are said to be of 1 franklin each if the electrostatic force between them is 1 dyne.

Inductance

Abhenry abH

Abhenry is the centimeter-gram-second electromagnetic unit of inductance, equal to one billionth of a henry.

Henry H

In physics and electronics, the henry is the SI derived unit of inductance. It is named after Joseph Henry (1797-1878), the American scientist who discovered electromagnetic induction independently of and at about the same time as Michael Faraday (1791-1867) in England. The inductance of a circuit is one Henry if the rate of change of current in a circuit is one ampere per second and the resulting electromotive force is one volt.

Microhenry μH

Millihenry mH

Nanohenry nH

Ohm-second Ohm·sec

Stathenry

The unit of inductance in the electrostatic centimeter-gram-second system of units, equal to the self-inductance of a circuit or the mutual inductance between two circuits if there is an induced electromotive force of 1 statvolt when the current is changing at a rate of 1 statampere per second; equal to approximately 8.9876 × 10^{11} henry.

Electrical Resistance and Conductance

Abmho abmho

A unit of conductance in the electromagnetic centimeter-gram-second system of units equal to 10^{9} mhos. Abbreviated $(a\Omega)^{-1}$. Also known as absiemens (aS).

Abohm — ab ohm

The unit of electrical resistance in the centimeter-gram-second system; 1 abohm equals 10^{-9} ohm in the meter-kilogram-second system. Abbreviated aΩ.

Gigaohm — G ohm

One billion ohms.

Kilohm — k ohm

One thousand ohms.

Megaohm — M ohm

One million ohms.

Microhm — µ ohm

One millionth of an ohm.

Microsiemens/micromho — µS

It is an alternative name for the microhm.

Milliohm — m ohm

One thousandth of an ohm.

Millisiemens/millimho — mS

Alternative name of the milliohm.

Nanohm — n ohm

One billionth of an ohm.

Ohm — Ohm/Ω

Named after the German physicist Georg Simon Ohm (1787-1854). The standard unit in the measure of electrical resistance, being the resistance of a circuit in which a potential difference of one volt produces a current of one ampere. As defined by the International Electrical Congress in 1893, and by United States Statute, it is a resistance substantially equal to 10^9 units of resistance of the C.G.S. system of electro-magnetic units, and is represented by the resistance offered to an unvarying electric current by a column of mercury at the temperature of melting ice 14.4521 grams in mass, of a constant cross-sectional area, and of the length of 106.3 centimeters. As thus defined it is called the international ohm.

Siemens/mho — S/℧

Mho is an alternative name of ohm. Mho is derived from spelling ohm backwards and is written with an upside-down capital Greek letter Omega: ℧. The term mho was suggested by Sir William Thomson. The mho was officially renamed to the siemens, replacing the old meaning of the "siemens unit", at a conference in 1881.

Statmho

The unit of conductance, admittance, and susceptance in the electrostatic centimeter-gram-second system of units, equal to the conductance between two points of a conductor when a constant potential difference of 1 statvolt applied between the points produces in this conductor a current of 1 statampere, the conductor not being the source of any electromotive force; equal to approximately 1.1126×10^{-12} (-12) mho. Abbreviated stat℧. Also known as statsiemens (statS).

Statohm

The unit of resistance, reactance, and impedance in the electrostatic centimeter-gram-second system of units, equal to the resistance between two points of a conductor when a constant potential difference of 1 statvolt between these points produces a current of 1 statampere; it is equal to approximately 8.9876×10^{11} (11) ohms. Abbreviated statΩ.

Electrical Voltage

Abvolt — abV

The unit of electromotive force in the electromagnetic centimeter-gram-second system; 1 abvolt equals 10^{-8} volt in the absolute meter-kilogram-second system. Abbreviated aV or abV.

Gigavolt — GV

One billionth volts.

Kilovolt — kV

One thousand volts.

Megavolt — MV

One million volts.

Microvolt — µV

One millionth of a volt.

Millivolt — mV

One thousandth of a volt.

Nanovolt — nV

One billionth of a volt.

Statvolt — statV

The statvolt is a unit of voltage and electrical potential used in the cgs system of units. The conversion to the SI system is 1 statvolt = 299.792458 volts. (The conversion factor 299.792458 is simply the numerical value of the speed of light in m/s divided by 10^6. The statvolt is also defined in the cgs system as 1 erg / esu.

Volt — V

Named after the Italian electrician Alessandro Volta. The unit of electro-motive force; defined by the International Electrical Congress in 1893 and by United States Statute as, that electro-motive force ''which steadily applied to a conductor whose resistance is one ohm will produce a current of one ampere. It is practically equivalent to 1000/1434 the electro-motive force of a standard Clark's cell at a temperature of 15 deg C.

Electromagnetic Radiation

Ångström (Angstrom) Å

Equal to one ten billionth of a meter (or 0.0001 micron); used to specify wavelengths of electromagnetic radiation.

Centimeter cm

One hundredth of a meter.

Electron Volt eV

Energy. e=höf where h = Planck constant (4.13566 x 10^{-15} electron volts/second). f = frequency in Hertz.

Exahertz EHz

10^{i8} hertz.

Gigahertz GHz

One thousand megahertz.

Hertz H

Named after the German physicist Heinrich Hertz (1857-1894) who was the first to produce electromagnetic waves artificially. Having a periodic interval of one second.

Kilohertz kHz

One thousand hertz.

Megahertz MHz

One million hertz.

Meter m

Equal to 39.37 English inches, the standard of linear measure in the metric system of weights and measures. It was intended to be, and is very nearly, the ten millionth part of the distance from the equator to the north pole, as ascertained by actual measurement of an arc of a meridian.

Micrometer/micron µm

A metric unit of length equal to one millionth of a meter. The thousandth part of one millimeter.

Millimeter mm

Nanometer nm

A metric unit of length equal to one billionth of a meter.

Petahertz PHz

10^{15} hertz.

Terahertz THz

10^{12} hertz.

Energy / Work

British thermal unit — Btu/BTU

The British thermal unit (symbol Btu or sometimes BTU) is a traditional unit of energy equal to about 1055 joules. It is the amount of energy needed to heat one pound of water by one degree Fahrenheit. In scientific contexts the Btu has largely been replaced by the SI unit of energy, the joule.

Gigaelectronvolt — GeV

A billionth electronvolts.

Megaelectronvolt — MeV

A million electronvolts.

Mega British thermal unit — MBtu

A million British thermal units.

Attojoule — aJ

1 x 10 $^{-18}$ joules.

Barrel of crude oil

It is equivalent to 5,800,000 Btu.

Calorie — cal

The unit of heat according to the French standard; the amount of heat required to raise the temperature of one kilogram (sometimes, one gram) of water one degree centigrade, or from 0 deg to 1 deg.

Electron volt — eV

A unit of energy equal to the work done by an electron accelerated through a potential difference of 1 volt.

Erg/dyne-centimeter

The unit of work or energy in the C.G.S. system, being the amount of work done by a dyne working through a distance of one centimeter; the amount of energy expended in moving a body one centimeter against a force of one dyne. One foot pound is equal to 13,560,000 ergs.

Foot-pound force — ft·lbf

A unit of work equal to a force of one pound moving through a distance of one foot.

Foot-poundals

Gallon gasohol (10% ethanol, 90% gasoline)

It is equivalent to 120,900 Btu.

Gallon middle distillate or diesel fuel oil

It is equivalent to 138,690 Btu.

Gallon of crude oil

It is equivalent to 138,095 Btu.

Gallon of ethanol

It is equivalent to 84,400 Btu.

Gallon of gasoline

It is equivalent to 125,000 Btu.

Gallon of kerosene or light distillate oil

It is equivalent to 135,000 Btu.

Gallon of liquefied petroleum gas — LPG

It is equivalent to 95,475 Btu.

Gallon of methanol

It is equivalent to 62,800 Btu.

Gallon residential fuel oil

It is equivalent to 62,800 Btu.

Gigajoule — GJ

Gigawatt-hour — GWh

Horsepower-hour — hp·h

Joule/wattsecond/newton-meter — J

Named after the English physicist James Prescott Joule (1818-1889). A unit of work which is equal to 10^7 units of work in the C.G.S. system of units (ergs), and is practically equivalent to the energy expended in one second by an electric current of one ampere in a resistance of one ohm. One joule is approximately equal to 0.738 foot pounds.

kg force meters — kgf.m

Work done by one kilogram of force acting through a distance of one meter.

Kilocalorie — kcal

Kilojoule — kJ

10^3 joules.

Kiloton

A measure of explosive power (of an atomic weapon) equal to that of 1000 tons of TNT.

Kilowatt-hour — KWh

Megajoule — MJ

A million joules.

Megawatt-hour — MWh

Microjoule — µJ

A thousandth of a millijoule.

Millijoule — mJ

A thousandth of a joule.

Pound of carbon (upper heating value)

It is equivalent to 14,550 Btu.

Therm

10^5 Btus.

Therm of natural gas

It is equivalent to 100,000 Btu.

Ton of coke

It is equivalent to 26,000,000 Btu.

Watt-hour — Wh

Flow (Dry)

Cubit feet per minute	cfm
Cubic feet per second	cfs
Cubic inches per minute	in^3/m
Cubic inches per second	in^3/s
Litres per minute	lpm

A cubic decimeter of material moving past a point every minute.

Litres per second	lps

A cubic decimeter of material moving past a point every second.

Flow (Liquid)

UK gallons per minute	gpm (UK)
UK gallons per second	gps (UK)
US gallons per minute	gpm (US)
US gallons per second	gps (US)
Litres per minute	lpm

A cubic decimeter of material moving past a point every minute.

Litres per second	lps

A cubic decimeter of material moving past a point every second.

Force

Atomic weight

Generally understood as the weight of the hydrogen atom.

Dyne — dyn

The unit of force, in the C.G.S. (Centimeter Gram Second) system of physical units; that is, the force which, acting on a gram for a second, generates a velocity of a centimeter per second.

Gram force — gf

Kilogram force/kilopond — kgf

Kilonewton — kN

Kip

Kilopounds of force.

Micronewton — μN

Millinewton — mN

Newton — N

Named after the English mathematician and physicist Sir Isaac Newton (1642-1727). A unit of force equal to the force that imparts an acceleration of 1 m/sec² to a mass of 1 kilogram; equal to 100,000 dynes.

Ounce force — ozf

Pound force — lbf

Poundal — pdl

The poundal is a non-SI unit of force. It is a part of the absolute foot-pound-second system of units, a coherent subsystem of English units introduced in 1879, and one of several specialized subsystems of mechanical units used as aids in calculations. It is defined as being the force which, acting on a pound avoirdupois for one second, causes it to acquire by the of that time a velocity of one foot per second. It is about equal to the weight of half an ounce, and is 13,825 dynes.

Sthene — sn

Named from the Greek word sthenos, strength. One sthene is the force required to accelerate a mass of one tonne at a rate of 1 m/s2. The sthene is the unit of force in the former Soviet mts system, 1933-1955.

Ton of force (long) — tnf

Ton of force of USA.

Ton of force (short) — tnf

It is equivalent to 2000 pounds of force.

Tonne of force (metric)

Metric ton of force. Equivalent to 1000 kilonewtons.

Fuel Consumption

Gallon (US) per 100 miles
Gallon (Imperial) per 100 miles
Kilometers per liter
Liters per 100 kilometers
Miles per gallon (Imperial) mpg (Imperial)
Miles per gallon (US) mpg (US)

Illumination

Candela steradian per square meter	
Foot candle	fc
Lumen per square centimeter	lm/cm^2
Lumen per square foot	lm/ft^2
Lumen per square meter	lm/m^2
Lux	lx
Metre-candle	m-cd
Phot	ph

A unit of illumination equal to 1 lumen per square centimeter; 10,000 phots equal 1 lux.

Length

Actus (roman actus)

Ancient Roman unit equivalent to 120 pedes and 35.5 metres.

Agate/ruby (typographical)

Unit of typographical measure, equivalent to 5.5 typographical points or about 1/14 of an inch. It can refer to the height of a line of type or a font that is 5.5 points.

Ångström (Angstrom) Å

The Ångström is a unit of length equal to 10−10 m (one ten-billionth of a meter) or 0.1 nm. Its symbol is the Swedish letter Å.

Arpent (Canadian)

It is a french unit based on the Roman actus. It is used in Quebec as well in the U.S. in the French Louisianna. It is equivalent to 180 french feet or about 58.47 metres.

Arpentcan

Unit equivalent to 27.52 miles.

Arpentlin (French arpent)

French unit of land measurement equivalent to 30 toises.

Arshin/arshine/archin

It is an ancient Russian unit used since the 16th century. It was standarized by Peter the Great in the 18th century to measure exactly twenty-eight English inches (71.1 cm).

Assbaa

It is an Arabian measure which correspond from the finger to 1/4 of a palm.

Astronomical unit AU

Abbreviated as AU, au, a.u. or ua, the astronomical unit represents the Earth-Sun distance. It is now defined as 149,597,870,700 metres (92,955,807.273 mi).

Barleycorn

The barleycorn is the smallest anglo-saxon unit of length. It is 1/108th of a yard, 1/36 of foot and or 1/3 of an inch.

Bohr Radius

The Bohr radius is a physical constant, approximately equal to the most probable distance between the proton and electron in a hydrogen atom in its ground state. It is named after the physicist Niels Bohr (1885–1962).

Bolt

A compact package or roll of cloth, as of canvas or silk, often containing about forty yards.

Bottom measure

One fortieth of an inch.

Bourgeois (typographical)

9 pt in height.

Brevier (typographical)

8 pt in height.

Cable length (U.S. Navy)

A cable length or cable's length is a nautical unit of measure equal to one tenth of a nautical mile or 100 fathoms, or sometimes 120 fathoms. The unit is named after the length of a ship's anchor cable in the age of sail.

Caliber (gun barrel caliber)

The diameter of round or cylindrical body, as of a bullet or column.

Cane

Persian unit.

Centimeter cm

The hundredth part of the meter.

Chain (engineers)

The engineers chain is equivalent to 100 ft.

Gunter's chain (surveyors)

Gunter's chain is a measuring device used for land survey. It was designed and introduced in 1620 by English clergyman and mathematician Edmund Gunter (1581–1626).

Charac (Persian)

Persian unit.

Chebel

Persian unit.

Cicero (typographical)

Typographical measurement. 1 cicero equals 12 didot points.

City block

An informal measure unit, about 100 yards.

Classical electron radius

The classical electron radius, also known as the Lorentz radius or the Thomson scattering length, is based on a classical (i.e., non-quantum) relativistic model of the electron.

Cloth finger

Used in sewing.

Cloth quarter

Used in sewing.

Columbian (typographical)

16 pt in height.

Compton wavelength of the Electron

Named after Arthur Holly Compton (1892-1962).

Compton wavelength of the Neutron

Named after Arthur Holly Compton (1892-1962).

Compton wavelength of the Proton

Named after Arthur Holly Compton (1892-1962).

Cubit (Biblical, Hebrew, english)

A measure of length, being the distance from the elbow to the extremity of the middle finger.

Note: The cubit varies in length in different countries, the English, Hebrew and Biblical cubits are 18 inches.

Cubit (Greek, Pechya)

A measure of length, being the distance from the elbow to the extremity of the middle finger.

Note: The cubit varies in length in different countries, the Greek cubit is 18.20 inches.

Cubit (Indian, Hasta)

A measure of length, being the distance from the elbow to the extremity of the middle finger.

Note: The cubit varies in length in different countries, the Greek cubit is 18.20 inches.

Cubit (Israeli)

A measure of length, being the distance from the elbow to the extremity of the middle finger.

Note: The cubit varies in length in different countries, the Israeli cubit is 21.8 inches.

Cubit (Roman)

A measure of length, being the distance from the elbow to the extremity of the middle finger.

Note: The cubit varies in length in different countries, the Roman cubit is 17.47 inches.

Diamond (typographical)

4 1/2 pt in height.

Digit/digitus

Represents a finger's breadth, commonly estimated to be three fourths of an inch.

Earth diameter

Diameter for the Earth.

Elite/Long primer (typographical)

10 pt in height.

Ell (Dutch/Flemish)

A measure for cloth; now rarely used. It is of different lengths in different countries; the English ell being 45 inches, the Dutch or Flemish ell 27, the Scotch about 37.

Ell (English)

A measure for cloth; now rarely used. It is of different lengths in different countries; the English ell being 45 inches, the Dutch or Flemish ell 27, the Scotch about 37.

Ell (Scotch)

A measure for cloth; now rarely used. It is of different lengths in different countries; the English ell being 45 inches, the Dutch or Flemish ell 27, the Scotch about 37.

Em

Used in typography. A quadrat, the face or top of which is a perfect square; also, the size of such a square in any given size of type, used as the unit of measurement for that type.

En

Used in typography. Half an em, that is, half of the unit of space in measuring printed matter.

English (typographical)

14 pt in height.

Fathom

A fathom (abbreviation: ftm) = 1.8288 metres, is a unit of length in the imperial and the U.S. customary systems, used especially for measuring the depth of water. Originally based on the distance between a man's outstretched arm.

Fathom (Greek)

4 Greek cubits.

Femtometer

A metric unit of length equal to one quadrillionth of a meter.

Fermi

A metric unit of length equal to one quadrillionth of a meter.

Finger breadth

The breadth of a finger, or the fourth part of the hand; a measure of nearly an inch.

Finger length

The length of finger, a measure in domestic use in the United States, of about four and a half inches or one eighth of a yard.

Foot ft or '

Equivalent to twelve inches; one third of a yard. This measure is supposed to be taken from the length of a man's foot.

Foot (Arabian)

Foot (Assyrian)

Foot (Roman, pes)

Foot (geodetic, survey)

A former U.S. definition of the foot as exactly 1200/3937 meter. It makes the meter equal exactly 39.37 inches. In 1959 the survey foot was replaced by the international foot, equal to exactly 30.48 centimeters.

Furlong

The eighth part of a mile; forty rods; two hundred and twenty yards. From the Old English fuhrlang, meaning "the length of a furrow".

Ghalva

Arabian unit equivalent to 720 arabic feet (230.4 m).

Gradus (Roman)

Great Primer (typographical)

18 pt in height.

Hand

A measure equal to a hand's breadth, -- four inches; a palm. Chiefly used in measuring the height of horses.

Inch in

One imperial or US customary inch is defined as 1⁄12 of a foot and is therefore 1⁄36 of a yard. Traditional standards for the exact length of an inch have varied, but it is now defined to be exactly 25.4 mm.

Ken

Japanese fathom. The ken is the length of a traditional tatami mat.

Kilometer km

The kilometre is a unit of length in the metric system, equal to one thousand metres. It is now the measurement unit used officially for expressing distances between geographical places on land in most of the world.

Klafter/Faden (German)

Originally 6 feet, after introduction of the metric system 10 feet. Regional changes from 1.75 m in Baden to 3 m in Switzerland.

Klafter/Faden (Switzerland)

Similar to the fathom.

League (Land, statute)

Used as a land measure. 3 statute miles.

League (Nautical)

Used as a marine measure. 3 nautical miles.

Li

A Chinese measure of distance, being a little more than one third of a mile.

Light second

The distance over which light can travel in one second; used as a unit in expressing stellar distances.

Light year

The distance over which light can travel in a year's time; used as a unit in expressing stellar distances. It is more than 63,000 times as great as the distance from the earth to the sun.

Line

The line is a unit of measurement, one line being equal to 1⁄12 of an English (prior to 1824) inch. It was defined as one-quarter of a barleycorn.

Link (Gunters, surveyors)

Part of a surveyors instrument (chain) which consists of links and is used in measuring land. One commonly in use is Gunter's chain, which consists of one hundred links, each link being 7.92" in length.

Link (U.S., engineers)

Used by surveyors. In the U.S., where 100-foot chains are more common, the link is the same as the foot.

Marathon

A footrace of 26 miles 385 yards.

Megameter

In the metric system, one million meters, or one thousand kilometers.

Meter m

Equal to 39.37 English inches, the standard of linear measure in the metric system of weights and measures. It was intended to be, and is very nearly, the ten millionth part of the distance from the equator to the north pole, as ascertained by actual measurement of an arc of a meridian.

Micrometer/micron µm

A metric unit of length equal to one millionth of a meter. The thousandth part of one millimeter.

Mil mil

Equal to one thousandth of an inch; used to specify thickness (e.g., of sheets or wire).

Mile (Roman)

5000 Roman feet.

Mile (nautical, geographical) nmi

The geographical, or Nautical mile is equal to one sixtieth of a degree of a great circle of the earth, or about 6080.27 feet.

Mile (statute) mi

Mile is from the Latin word for 1000 (mille). A mile conforming to statute, that is, in England and the United States, a mile of 5,280 feet, as distinguished from any other mile.

Millimeter mm

The millimeter is the thouthandth part of the meter.

Minion (typographical)

7 pt in height.

Nail (cloth)

Used for measuring cloth. 1/20 ell. The length of the last two joints (including the fingernail) of the middle finger. The nail is equivalent to 1/16 yard, 1/4 span.

Nanometer nm

A metric unit of length equal to 10e-9 meters.

Naval shot

Equal to 15 fathoms.

Nonpareil (typographical)

6 pt in height.

Pace

The length of a step in walking or marching, reckoned from the heel of one foot to the heel of the other.

Note: Ordinarily the pace is estimated at two and one half linear feet.

Pace/passus (Roman)

The Roman pace (passus) was from the heel of one foot to the heel of the same foot when it next touched the ground. It is equivalent to five Roman feet.

Pace (double-time marching)

The regulation marching pace in the English and United States armies is thirty-six inches for double time.

Pace (quick-time marching)

The regulation marching pace in the English and United States armies is thirty inches for quick time.

Palm (Greek)

A lineal measure equal either to the breadth of the hand or to its length from the wrist to the ends of the fingers. It is used in measuring a horse's height. In Greece, the palm was reckoned at three inches.

Palm (Roman greater)

A lineal measure equal either to the breadth of the hand or to its length from the wrist to the ends of the fingers. It is used in measuring a horse's height. One of two Roman measures of the palm, the greater palm is 8.73 inches.

Palm (Roman lesser)

A lineal measure equal either to the breadth of the hand or to its length from the wrist to the ends of the fingers. It is used in measuring a horse's height. One of two Roman measures of the palm, the lesser palm is 2.91 inches.

Parasang

A Persian measure of length, which, according to Herodotus and Xenophon, was thirty stadia, or somewhat more than three and a half miles. The measure varied in different times and places, and, as now used, is estimated at three and a half English miles.

Parsec

A unit of astronomical length based on the distance from Earth at which stellar parallax is 1 second of arc. It is equivalent to 3.262 light years.

Pearl (typographical)

5 pt in height.

Pica (typographical)

A size of type next larger than small pica, and smaller than English. It is equal to 12 pt in height.

Picometer

A metric unit of length equal to one trillionth of a meter.

Point (PostScript)(typographical) pt

Typographical measurement. Created by Adobe. There are exactly 72 PostScript points in 1 inch.

Point (didot)(typographical) pt

Typographical measurement. The didot system originated in France but was used in most of Europe.

Point (pica)(typographical) pt

Typographical measurement. This system was developed in England and is used in Great-Britain and the US. 1 pica equals 12 pica points.

Ri

Japanese league.

Rod/pole/perch

The rod is a unit of length equal to 5½ yards, 16½ feet or 1⁄320th of a statute mile. Since the adoption of the

international yard on 1 July 1959, it has been equivalent to exactly 5.0292 meters. In old English, the term lug is also used.

Rope

As a linear measure, used in drainage and hedging, it is equal to 20 feet, i.e. 6.096 m (for the international inch).

Sadzhens/sagene/sazhen

Russian and East European. Used in previous centuries (until WWI or WWII). The distance between a grown man's spread of arms, from the finger- tips of one to hand to the finger-tips of the other hand. Equal to about 7 feet long (2.13 m).

Shaku

A Japanese foot. Shaku is also a unit of area and volume.

Skein

120 yards. A skein of cotton yarn is formed by eighty turns of the thread round a fifty-four inch reel.

Small pica (typographical)

11 pt in height.

Soccer field

100 yards.

Solar diameter

Diameter of our sun.

Span (Greek)

To measure by the span of the hand with the fingers extended, or with the fingers encompassing the object; as, to span a space or distance; to span a cylinder. One half of a Greek cubit.

Span (cloth)

9 inches.

Spindle (cotten yarn)

A cotten yarn measure containing 15,120 yards.

Spindle (linen yarn)

A linen yarn measure containing 14,400 yards.

Stadia/stadion (Greek)

It was equal to 600 Greek or 625 Roman feet, or 125 Roman paces, or to 606 feet 9 inches English. This was also called the Olympic stadium, as being the exact length of the foot-race course at Olympia.

Stadium (Persian)

Stadium (Roman)

It was equal to 600 Greek or 625 Roman feet, or 125 Roman paces, or to 606 feet 9 inches English. This was also called the Olympic stadium, as being the exact length of the foot-race course at Olympia.

Sun (Japanese)

Japanese measurement.

Toise (French)

French fathom. It was originated in pre-revolutionary France. In North America, it was used in colonial French establishments in early New France, French Louisiana (La Louisiane), and Quebec.

Vara (Mexican)

A Mexican measure of length equal to about one yard (32.99 inches).

Vara (Spanish)

It is an old Spanish unit of length. Varas are a surveying unit that appears in many deeds in the southern United States and also used in Latin America. The Spanish unit was set at about 835.905 mm in 1801. In Argentina, the vara measured about 866 mm.

Verst/werst

A Russian measure of length containing 3,500 English feet.

Yard yd

A yard (abbreviation: yd) is a unit of length in several different systems including United States customary units, Imperial units and the former English units. It is equal to 3 feet or 36 inches. Was legally defined to be exactly 0.9144 metres.

Luminance

Apostilb

Named from the Greek stilbein, to "glitter" or "shine," with the prefix apo-, "away from". A luminance unit equal to one ten-thousandth of a lambert. Also known as blandel.

Candela per square centimeter cd/cm^2

Candela per square foot cd/ft^2

Candela per square inch cd/in^2

Candela per square meter cd/m^2

Foot lambert fL

Kilocandela per square meter kcd/cm^2

Lambert L

Named after the German physicist Johann Heinrich Lambert (1728-1777). Equal to the brightness of a perfectly diffusing surface that emits or reflects one lumen per square centimeter

Lumen per steradian square meter

Magnitudes per square arcsecond mags/arcsec2

Used by astronomers to define the darkness of the night sky. Stars are rated by brightness in magnitudes . A lower magnitude number is a brighter star. The star Vega has a magnitude of zero, and a measurement of 0 magnitudes per square arcsecond would be like having every square arcsecond in the sky will with the brightness of the star Vega.

Millilambert mL

Nit

Named from the Latin niteo, to shine.

Stilb sb

From a Greek word stilbein meaning "to glitter". Equal to one candela per square centimeter or 104 nits.

Luminous flux

Candela steradian cd·sr

Lumen lm

The SI unit of luminous flux equal to the luminous flux received on a unit surface, all points of which are equidistant from a point source having a uniform intensity of 1 candela.

Luminous intensity (Point Sources)

Candela cd

The basic unit of luminous intensity adopted under Le Système international d'unités; equal to 1/60 of the luminous intensity per square centimeter of a blackbody radiating at the temperature of 2,046 degrees Kelvin syn: candle, cd, standard candle.

Hefner candle HC

A unit of luminous intensity, late 19th – early 20th centuries, equal to the horizontal intensity of the light from a lamp developed by the German engineer Friedrich Franz von Hefner-Alteneck (1845-1904) in 1884. Abbreviation, HK. Mainly used in Germany before 1942. One hefner unit is approximately 0.903 candela.

Lumen per steradian lm/sr

Magnetic Field Strength

Ampere per meter	A/m
Ampere-turn per inch	At/in
Ampere-turn per meter	At/m
Kiloampere per meter	kA/m
Newton per weber	N/Wb

Equivalent to Ampere per meter.

Oersted	Oe

Named after the Danish physicist and chemist Hans Christian Oersted (1777-1851). The C.G.S. unit of magnetic reluctance or resistance, equal to the reluctance of a centimeter cube of air (or vacuum) between parallel faces. Also, a reluctance in which unit magnetomotive force sets up unit flux.

Magnetic Flux

Line of force

Equivalent to Maxwell.

Maxwell	Mx

Named after the Scottish physicist James Clerk Maxwell (1831-1879). A cgs unit of magnetic flux equal to the flux perpendicular to an area of 1 square centimeter in a magnetic field of 1 gauss.

Microweber	μWb

10^{-6} weber.

Milliweber	mWb

10^{-3} weber.

Unit pole (electromagnetic unit)

Weber	Wb

The derived SI unit of magnetic flux; the flux that, when linking a circuit of one turn, produces in it an emf of 1 volt as it is reduced to zero at a uniform rate in one second. 1 weber is equivalent to 108 maxwells. The weber is named for the German physicist Wilhelm Eduard Weber (1804–1891).

Magnetic Flux Density

Gamma

Equivalent to one nanotesla.

Gauss	G

Named after German mathematician and astronomer Karl Friedrich Gauss (1777-1855). The C.G.S. unit of density of magnetic field, equal to a field of one line of force per square centimeter, being thus adopted as an international unit at Paris in 1900; sometimes used as a unit of intensity of magnetic field. It was previously suggested as a unit of magnetomotive force.

Kilogauss	kG

10^3 gauss.

Line per square inch

Equivalent to maxwell per square inch.

Maxwell per square centimeter	Mx/cm^2
Maxwell per square inch	Mx/in^2
Microtesla	μT
Millitesla	mT
Nanotesla	nT
Tesla	T

Named after the Croatian born inventer Nikola Tesla (1856-1943). A unit of magnetic flux density equal to one weber per square meter.

Weber per square meter	Wb/m^2

Magnetomotive Force

Ampere	A

The basic SI unit of electric current; the constant current that, when maintained in two parallel conductors of infinite length and negligible cross section placed 1 metre apart in free space, produces a force of 2×10^{-7} newton permetre between them. One ampere is equivalent to 1 coulomb per second.

Ampere-turn	At

A unit of magnetomotive force equal to the magnetomotive force produced by the passage of 1 ampere through 1 complete turn of a coil.

Gilbert	Gb

The unit is named after William Gilbert (1544–1603) English physician, astronomer and natural philosopher. The unit of magnetomotive force in the electromagnetic system, equal to the magnetomotive force of a closed loop of one turn in which there is a current of 1/(4π) abamp.

Kiloampere	kA

10^3 ampere.

Oersted-centimeter

Equivalent to gilbert.

Mass

amu (atomic mass unit)/dalton u/Da

Unit of mass for expressing masses of atoms or molecules.

Bekah (biblical)

1/2 shekel, 5 pennyweight.

Carat

The weight by which precious stones and pearls are weighed.

Catty/caddy/chin

An Chinese or East Indian Weight of 1 1/3 pounds.

Cental

British for 100 pounds. Also called hundredweight in the US.

Cotton bale (Egypt

Egyptian measurement equivalent to 750 pounds.

Cotton bale (US)

US measurement equivalent to 500 pounds.

Crith

From the Greek word for barleycorn. The weight of a liter of hydrogen at 0.01° centigrade and with a and pressure of 1 atmosphere.

Denarius

Roman weight measuring 60 troy grains.

Dinar

Arabian weight measuring 4.2 gram.

Doppelzentner

Metric hundredweight equivalent to 100 kg.

Drachma (Dutch)

The weight of an old Dutch drachma coin.

Drachma (Greek)

The weight of an old Greek drachma coin.

Dram (avoirdupois)

In Avoirdupois weight, one sixteenth part of an ounce.

Dram (Troy, apothecary)

In Apothecaries' weight, one eighth part of an ounce, or sixty grains.

Earth mass

Mass of the Earth.

Electron rest mass

The mass of an electron as measured when the it is at rest relative to an observer, an inherent property of the body.

Funt

Russian, equivalent to 0.9 pounds.

Grain

The unit of the English system of weights; so called because considered equal to the average of grains taken from the middle of the ears of wheat. 7,000 grains constitute the pound avoirdupois and 5,760 grains constitute the pound troy.

Gram

The unit of weight in the metric system. It was intended to be exactly, and is very nearly, equivalent to the weight in a vacuum of one cubic centimeter of pure water at its maximum density. It is equal to 15.432 grains.

Hundredweight (long, English)

A denomination of weight of 112 pounds.

Hundredweight (short/net, US)

A denomination of weight of 100 pounds. In most of the United States, both in practice and by law, it is 100 pounds avoirdupois.

Hyl

From an ancient Greek word for matter. One hyl is the mass that is accelerated at one meter per second per second by one kilogram of force. Equivalent to 0.00980665 kg.

Kat

Egyptian measure.

Kerat

Egyptian measure.

Kilogram kg

The kilogram or kilogramme (SI unit symbol: kg; SI dimension symbol: M), is the base unit of mass in the International System of Units and is defined as being equal to the mass of the International Prototype of the Kilogram (IPK).

Kin

Japanese kin. Equivalent to 1.323 pound.

Kona

Indian measure.

Kwan

Japanese kwan. Equivalent to 8.27 pounds.

Lian/tael

Chinese. Equivalent to 1/16 catty.

Libra (Mexican)

Libra (Spanish)

Libra/librae/as/pondu

Roman originator of the English pound (lb). Equivalent to 12 uncia.

Livre (French)

Lot (German)

One half unze.

Mast

British unit.

Megagram Mg

A million grams ($1x10^6$).

Microgram µg/mcg

In the metric system, a microgram (µg or mcg) is a unit of mass equal to one millionth (1/1,000,000) of a gram (1×10^{-6}), or 1/1000 of a milligram. It is one of the smallest units of mass (or weight) used in a macroscopic context.

Milligram mg

A measure of weight, in the metric system, being the thousandth part of a gram; equal to the weight of a cubic millimeter of water, or 0.01543 of a grain avoirdupois.

Mina (Greek)/minah (Biblical)

The weight of the ancient Greek mina coin. 60 shekels.

Mite (English)

A small weight, equivalent to one twentieth of a grain.

Neutron rest mass

The mass of a neutron as measured when the it is at rest relative to an observer, an inherent property of the body.

Obolos (Ancient Greece)

Ancient Greek weight of an obol coin, equivalent to 1/6 drachma.

Obolos (Modern Greece)

Modern Greek name for decigram.

Oka (Egyptian)

Oka (Greek)

Okia

Egyptian measure.

Ounce (avoirdupois)

The sixteenth part of a pound avoirdupois.

Ounce (Troy)

A unit of apothecary weight equal to 480 grains.

Pala

Indian measure.

Pennyweight (Troy)

A troy weight containing twenty-four grains, or the twentieth part of a troy ounce; as, a pennyweight of gold or of arsenic. It was anciently the weight of a silver penny.

Pfund (German)

German pound. 500 grams, 16 unze.

Picul (Borneo)

Equivalent to 135 5/8 pounds.

Picul (Japan)

Equivalent to 133 1/3 pounds.

Picul/tan/pecul/pecal (Chinese/Summatra)

100 catty. 133 1/2 pounds.

Pood (Russian)

A Russian unit, equal to forty Russian pounds or about thirty-six English pounds avoirdupois.

Pound (avoirdupois)

The pound in general use in the United States and in England is the pound avoirdupois, which is divided into sixteen ounces, and contains 7,000 grains. The pound troy is divided into twelve ounces, and contains 5,760 grains. 144 pounds avoirdupois are equal to 175 pounds troy weight.

Pound (Troy)

The pound troy is divided into twelve ounces, and contains 5,760 grains. 144 pounds avoirdupois are equal to 175 pounds troy weight.

Proton rest mass

The mass of a proton as measured when the it is at rest relative to an observer, an inherent property of the body.

Quarter (long)

The fourth part of a long hundredweight, equal to 28 pounds.

Quarter (short)

The fourth part of a short hundredweight, equal to 25 pounds.

Quintal

A metric measure of weight, being 100,000 grams, or 100 kilograms.

Quintal (Spanish)

Spanish hundredweight.

Quintal (long, UK)

112 pounds.

Quintal (short, UK)

100 pounds.

Scruple (Troy)

A weight of twenty grains; the third part of a troy dram.

Scrupulum (Roman)

Shekel (Israeli)

The sixtieth part of a mina. Ten pennyweight. An ancient weight and coin used by the Jews and by other nations of the same stock.

Slug

One slug is the mass accelerated at 1 foot per second by a force of 1 pound.

Stone (butchers)

Used to measure meat or fish weight. It is equivalent to 8 pounds.

Stone (cheese)

16 pounds.

Stone (glass)

5 pounds.

Stone (hemp)

32 pounds.

Stone (legal)

14 pounds.

Talanton

Greek measure.

Talent (Hebrew)

Talent (Roman)

125 Roman libra.

Talent (gold)

Two silver talents, 250 lbs.

Talent (silver)

3,000 shekels or 125 lbs.

Ton (UK, long/gross/deadweight)

A British unit of weight equivalent to 2240 pounds.

Ton (US, short) tn

A US unit of weight equivalent to 2000 pounds.

Tonne/metric ton t

A metric ton, One Megagram, 1000 kg.

Uncia nmi

Ancient Roman. A twelfth part, as of the Roman "as" or "libra"; an ounce. 420 grains.

Unze (German)

German ounce. 1/16 pfund.

Musical Notes

Breve

A note or character of time, equivalent to two semibreves or four minims. When dotted, it is equal to three semibreves.

Crotchet

A time note, with a stem, having one fourth the value of a semibreve, one half that of a minim, and twice that of a quaver; a quarter note.

Minim

A time note, a half note, equal to half a semibreve, or two quarter notes or crotchets.

Quaver

An eighth note.

Whole note/semibreve

A note of half the time or duration of the breve; now usually called a whole note.

Power

Btu per hour	Btu/h
Btu per second	Btu/s
Calorie per second	cal/s
Dyne centimeter per second	
Erg per second	erg/s
Foot pound force per minute	ft·lbf/min
Foot pound force per second	ft·lbf/s
Frig per hour	frig/h

The same as kcal/h, but used for air conditioning and refrigerating.

Horsepower	hp
Horsepower (boiler)	

A unit of power representing the power exerted by a horse in pulling.

Joule per second	J/s
Kilocalorie per hour	kcal/h

Useful for calculating heating facilities and kitchens.

Kilowatt	kW
Lusec	

Used to measure the leakage of vacuum pumps. A flow of one liter per second at a pressure of one micrometer of mercury.

Megawatt	MW

A million watts.

Microwatt	µW

10^{-6} watt.

Milliwatt	mW

A Thousandth of a watt.

Newton meter per second	N·m/s
Ton of refrigeration	TR
Watt	W

Named after the Scottish engineer and inventor James Watt (1736-1819). A unit of power or activity equal to 10^{7} C.G.S. units of power, or to work done at the rate of one joule a second.

Prefixes and Suffixes

atto a

10^{-18}. Origin Old Norse eighteen, "atten" as in 10 ^-18.

bi/double

Two times.

billion (US)/milliard (UK)

10^{9}.

centi c

10^{-2}. Origin Latin hundred, hundredth, "centum".

centillion (US)

10^{303}. Note: British word centillion means 10 ^600.

centimilli cm

10^{-5}.

chico ch

10^{-39}. Coined by Morgan Burke after Marx brother Chico Marx.

dea/nonillion (US)/quintillion (UK)/grouchi

10^{30}. The word grouchi was coined by Morgan Burke after Marx brother Groucho Marx.

dea/deca/ten Gc

10^{1}. Ten times. Origin Greek for ten: "deka".

deci d

10^{-1}. Origin Latin tenth, "decimus".

decimilli dm

10^{-4}.

demi/semi/half

One half.

dotrigintillion (US)

10^{99}.

dovigintillion (US)

10^{69}.

Dozen

Twelve items. Usually used to measure the quantity of eggs in a carton.

Dozen (bakers, long)

Thirteen items. The cardinal number that is the sum of twelve and one. Syn: thirteen, 13, XIII, long dozen.

duodec

Twelve times.

duodecillion (US)/chici

10^{39}. The word chici was coined by Morgan Burke after Marx brother Chico Marx.

eight

One eigth.

exa/quintillion (US)/trillion (UK) E

10^{18}. Origin Greek for outside "exo" / Greek six "hexa" as in 1000 ^6.

femto f

10^{-15}. Origin Old Norse fifteen "femten", as in 10 ^-15.

giga G

10^{9}. Origin Greek for giant, "gigas".

googol

10^{100}. Ten dotrigintillion (US). Note: a googolplex is 10 ^10 ^10 ^2.

gross

Twelve dozens.

gummo

10^{-36}. Coined by Morgan Burke after Marx brother Gummo Marx.

hecto/hundred

One hundred times, 10 ^2. Origin Greek for hundred, "hekaton".

hectokilo hk

10^{5}. 100 thousand times.

kilo/thousand k

One thousand times, 10 ^3. Origin Greek for thousand "chylioi".

mega/million M

10^{6}. One million times. Origin Greek for large, great, "megas".

micro µ

10^{-6}. A millionth part of; as, microfarad, microohm, micrometer. Origin Latin small "mikros".

milli m

10^{-3}. A prefix denoting a thousandth part of; as, millimeter, milligram, milliampere. Origin Latin thousand "mille".

myra/myria ma

Ten thousand times, 10 ^4.

nano n

10^{-9}. Origin Greek dwarf, "nanos".

nea/octillion (US)/quadrilliard (UK)/harpi Hr

10^{27}. The word harpi was coined by Morgan Burke after Marx brother Harpo Marx.

novemdecillion (US)/decillion (UK)

10^{60}.

novemtrigintillion (US)/vigintillion (UK)

10^{120}.

novemvigintillion (US)/quindecillion (UK)

10^{90}.

octodecillion (US)

10^{57}.

octotrigintillion (US)

10^{117}.

octovigintillion

10^{87}.

one/mono

Single unit value.

Parts per million ppm

10^{-6}. Parts per million is usually used in measuring chemical concentrations.

Percent %

10^{-2}. A proportion multiplied by 100.

peta/quadrillion (US)/billiard (UK) P

10^{15}. Origin Greek for spread "petalos"/Greek five "penta" as in 1000^5. Note: British use the words "1000 billion".

pico p

10^{-12}. Origin Italian tiny, "piccolo".

quadr/quadri/quadruple

Four times.

Quarter

One fourth.

quattuordecillion

10^{45}.

quattuortrigintillion (US)

10^{105}.

quattuorvigintillion

10^{75}.

quin

Five times.

quindecillion (US)/octillion (UK)

10^{48}.

quintrigintillion (US)/octodecillion (UK)

10^{108}.

quinvigintillion (US)/tredecillion (UK)

10^{78}.

revo/zeppo zp

10^{-33}. The word zeppo was coined by Morgan Burke after Marx brother Zeppo Marx.

septendecillion(US)/nonillion (UK)

10^{54}.

septentrigintillion (US)/novemdecillion (UK)

10^{114}.

septenvigintillion (US)/quattuordecillion (UK)

10^{84}.

sesqui/sesqu

One and one half times.

sex/hexad

Six times.

sexdecillion (US)

10^{51}.

sextrigintillion (US)

10^{111}.

sexvigintillion (US)

10^{81}.

syto/harpo hr

10^{-27}. The word harpo was coined by Morgan Burke after Marx brother Harpo Marx.

tera/trillion (US)/billion (UK) T

10^{12}. Origin Greek for monster "teras"/Greek four "tetra" as in 1000^4. Note: British use the word billion.

thrice/tri/triple

Three times.

tredecillion (US)/septillion (UK)

10^{42}.

tredo/groucho gc

10^{-30}. The word groucho was coined by Morgan Burke after Marx brother Groucho Marx.

tretrigintillion (US)/septendecillion (UK)

10^{102}.

trevigintillion (US)/duodecillion (UK)

10^{72}.

trigintillion (US)

10^{93}.

una/decillion (US)/zeppi Zp

10^{33}. The word zeppi was coined by Morgan Burke after Marx brother Zeppo Marx.

undec

Eleven times.

undecillion (US)/sextillion (UK)/gummi Gm

10^{36}. The word gummi was coined by Morgan Burke after Marx brother Gummo Marx.

untrigintillion (US)/sexdecillion (UK)

10^{96}.

unvigintillion (US)/undecillion (UK)

10^{66}.

vic

Twenty times.

vigintillion (US)

10^{63}.

yocto/fito y

10^{-24}. Yocto origin Latin penultimate letter y, "iota".

yotta/septillion (US)/quadrillion (UK) Y

10^{24}. Origin Latin penultimate letter y, "iota".

zepto/ento z

10^{-21}. Zepto origin Latin ultimate letter z, "zeta".

zetta/sextillion (US)/trilliard (UK) Z

10^{21}. Origin Latin ultimate letter z, "zeta".

Pressure and Stress

Atmosphere (absolute, standard) atm

The average pressure of the Earth's atmosphere at sea level.

Atmosphere (technical) atm

A metric unit equal to one kilogram of force per square centimeter.

Bar bar

From the Greek word baros.

Barie/barye

Centimeter of mercury (0ºC) cmHg

Centimeter of water (39.2º F, 4ºC) cmH_2O

Centimeter of water (60ºF, 15.5ºC) cmH_2O

Dyne per square centimeter dyn/cm^2

Feet of water (39.2ºF, 4ºC) ftH_2O

Feet of water (60ºF, 15.5ºC) ftH_2O

Foot of mercury (0ºC) ftHg

Hectopascal hPa

100 pascals exactly.

Inches of mercury (0ºC) inHg

Inches of mercury (60ºF, 15.5ºC) inHg

Inches of water (39.2ºF, 4ºC) inH_2O

Inches of water (60ºF, 15.5ºC) inH_2O

Kilonewton per square centimeter kN/cm^2

Used for loads and concrete stress.

Kilonewton per square meter kN/m^2

Used for ground pressure.

Kilogram force per square centimeter kgf/cm^2

Used for ground pressure and steel stress.

Kilogram force per square meter kgf/m^2

Kilopascal kPa

One thousand pascals exactly.

Megapascal MPa

One million pascals exactly.

Meter of water (39.2ºF, 4ºC) mH_2O

Meter of water (60ºF, 15.5ºC) mH_2O

Microbar μbar

10^{-6} bars.

Micrometer of mercury μHg

Micron μ

Used in vacuum technology. Equal to 1 millitorr.

Millibar mbar

One thousandth of a bar.

Millimeter of mercury (0ºC) mmHg

Millimeter of water (39.2ºF, 4ºC) mmH_2O

Millimeter of water (60ºF, 15.5ºC) mmH_2O

Newton per square centimeter N/cm^2

Newton per square meter N/m^2

Newton per square millimeter N/mm^2

Used for concrete stress.

Ounces per square inch oz/in^2

Pascal Pa

Named after the French philosopher and mathematician Blaise Pascal (1623 - 1662). Equal to one newton per square meter.

Pieze

From the Greek word piezein (to press). The pieze is a pressure of one sthene per square meter. 1000 newtons per square meter.

Pound force per square foot lbf/ft^2

Pound force per square inch psi

Tons (UK) per square foot $tons(UK)/ft^2$

Tons (US) per square foot $tons(US)/ft^2$

Torricelli torr

Named after Italian physicist and mathematician Evangelista Torricelli, (1608-1647). A unit of pressure equal to 0.001316 atmosphere.

Shoe Size

Children (US)

Starting at 4 5/6" for size 5 1/2 up to 7 1/3" for size 13 then 7 2/3" for size 1 and going up to 9" for size 5.

Men (UK)

Starting at 9 1/3" for size 5 and moving up by 1/6" for each half size to 11 2/3" for size 12. Beware that some manufacturers use different measurement techniques.

Men (US)

Starting at 9 1/3" for size 6 and moving up by 1/6" for each half size to 11 2/3" for size 13. Beware that some manufacturers use different measurement techniques.

Women (UK)

Starting at 8 1/2" for size 3 and moving up by 1/6" for each half size to 10 5/6" for size 10. Beware that some manufacturers use different measurement techniques.

Women (US)

Starting at 8 1/2" for size 5 and moving up by 1/6" for each half size to 10 5/6" for size 12. Beware that some manufacturers use different measurement techniques.

Centimeter cm

The hundredth part of a meter; a measure of length equal to rather more than thirty-nine hundredths (0.3937) of an inch.

Inch in

The twelfth part of a foot, commonly subdivided into halves, quarters, eights, sixteenths, etc., as among mechanics. It was also formerly divided into twelve parts, called lines, and originally into three parts, called barleycorns, its length supposed to have been determined from three grains of barley placed end to end lengthwise.

Barleycorn b

The twelfth part of a foot, commonly subdivided into halves, quarters, eights, sixteenths, etc., as among mechanics. It was also formerly divided into twelve parts, called lines, and originally into three parts, called barleycorns, its length supposed to have been determined from three grains of barley placed end to end lengthwise.

Specific Heat

Btu per pound degree F	BTU/lb·ºF
Joule per kilogram degree C	J/kg·ºC
Joule per kilogram kelvin	J/kg·K
Kilocalories per kilogram degree C	kcal/kg·ºC

Speed / Velocity

Centimeter per second	cm/s
Foot per minute	ft/min
Foot per second	ft/s
Kilometer per hour	km/h
Kilometer per second	km/s
Knot	

Nautical measurement for speed as one nautical mile per hour. The number of knots which run off from the reel in half a minute, therefore, shows the number of miles the vessel sails in an hour.

Knot (admiralty)	
Mach (sea level, 32 deg F)	
Meter per second	m/s
Mile per day	mi/day
Miles per hour	mi/h
Miles per second	mi/s
Millimeter per second	mm/s
Speed of light/warp	c

The speed at which light travels in a vacuum; about 300,000 km per second; a universal constant.

Temperature

Celsius ºC

Celsius, also known as centigrade, is a scale and unit of measurement for temperature. It is named after the Swedish astronomer Anders Celsius (1701–1744), who developed a similar temperature scale.

Celsius absolute ºC absolute

Fahrenheit ºF

Fahrenheit (symbol °F) is a temperature scale based on one proposed in 1724 by, and named after, the physicist Daniel Gabriel Fahrenheit (1686–1736).

Fahrenheit absolute ºF absolute

Kelvin K

The Kelvin scale is an absolute, thermodynamic temperature scale using as its null point absolute zero, the temperature at which all thermal motion ceases in the classical description of thermodynamics.

Rankine ºR or ºRa

Rankine is a thermodynamic (absolute) temperature scale named after the Glasgow University engineer and physicist William John Macquorn Rankine, who proposed it in 1859. (The Kelvin scale was first proposed in 1848).

Réaumur ºR or ºRe

The Réaumur scale (°Ré, °Re, °R), also known as "octogesima division", is a temperature scale in which the freezing and boiling points of water are set to 0 and 80 degrees respectively. The scale is named after René Antoine Ferchault de Réaumur.

Temperature Difference

Temp. diff. in degrees Celsius ºC

Temp. diff. in degrees Fahrenheit ºF

Temp. diff. in degrees Rankine ºR

Temp. diff. in degrees Réamur ºRe

Temp. diff. in Kelvin K

Thermal Conductance (Area)

British thermal units per hour square foot deg F Btu/h·ft².ºF

British thermal units per second square foot deg F Btu/sec·ft².ºC

Kilocalories per hour square meter degree C kcal/h·m.ºC

Watts per square meter Kelvin $W/m^2 \cdot K$

Watts per square meter degree Celsius $W/h \cdot m^2 \cdot ºC$

Thermal Conductance (Linear)

British thermal units per second foot deg F Btu/sec/ft·ºF

Kilocalories per hour meter degree C kcal/h·m·ºC

Watts per meter Kelvin W/m·K

Watts per meter degree Celsius W/m·ºC

Thermal Resistance

Clo clo

Clo is the unit for effective clothing insulation. It is used to evaluate the expected comfort of users in certain humidity, temperature and workload conditions (and estimate air conditioning or heating loads, for instance).

Hour square foot degree F per BTU $h \cdot ft^2 \cdot ºF/Btu.$

Hour square meter degree C per kilocalorie $h \cdot m^2 \cdot ºC/kcal$

Square meter degree C per watt $m^2 \cdot ºC/W$

Square meter kelvin per watt $m^2 \cdot K/W$

Time

Century

A period of a hundred years; as, this event took place over two centuries ago.

Note: Century, in the reckoning of time, although often used in a general way of any series of hundred consecutive years (as, a century of temperance work), usually signifies a division of the Christian era, consisting of a period of one hundred years ending with the hundredth year from which it is named; as, the first century (a. d. 1-100 inclusive); the seventh century (a.d. 601-700); the eighteenth century (a.d. 1701-1800). With words or phrases connecting it with some other system of chronology it is used of similar division of those eras; as, the first century of Rome (A.U.C. 1-100).

Cesium vibrations — vibrations

It takes one second for hot cesium atoms to vibrate 9,192,631,770 times (microwaves). This standard was adopted by the International System in 1967.

Day — d

The period of the earth's revolution on its axis, ordinarily divided into twenty-four hours.

It is measured by the interval between two successive transits of a celestial body over the same meridian, and takes a specific name from that of the body. Thus, if this is the sun, the day (the interval between two successive transits of the sun's center over the same meridian) is called a solar day; if it is a star, a sidereal day; if it is the moon, a lunar day.

Day (lunar/tidal)

24 hours 50 minutes used in tidal predictions.

Day (sidereal)

The interval between two successive transits of the first point of Aries over the same meridian. The Sidereal day is 23 h. 56 m. 4.09 s. of mean solar time.

Decade

A group or division of ten; esp., a period of ten years; a decennium; as, a decade of years or days; a decade of soldiers; the second decade of Livy.

Fortnight

Fourteen nights, our ancestors reckoning time by nights and winters. The space of fourteen days; two weeks.

Hour — h

The twenty-fourth part of a day; sixty minutes.

Microsecond — µs

One millionth of a second.

Millennium

A thousand years; especially, the thousand years mentioned in the twentieth chapter in the twentieth chapter of Revelation, during which holiness is to be triumphant throughout the world. Some believe that, during this period, Christ will reign on earth in person with his saints.

Millisecond

One thousandth of a second.

Minute — min

The sixtieth part of an hour; sixty seconds.

Month

One of the twelve portions into which the year is divided; the twelfth part of a year, corresponding nearly to the length of a synodic revolution of the moon, whence the name. In popular use, a period of four weeks is often called a month.

Month (sidereal)

Period between successive conjunctions with a star, 27.322 days (27 d 7 h 43 min 11.5 s).

Month (synodic/lunar month/lunation)

The period between successive new moons (29.53059 days). Synomym: lunar month, moon, lunation.

Nanosecond — ns

10^{-9} seconds.

Novennial

Done or recurring every ninth year.

Octennial

Happening every eighth year; also, lasting a period of eight years.

Olympiad

A period of four years, by which the ancient Greeks reckoned time, being the interval from one celebration of the Olympic games to another, beginning with the victory of Coroebus in the foot race, which took place in the year 776 b.c.; as, the era of the olympiads.

Picosecond — ps

10^{-i2} seconds.

Pregnancy

The condition of being pregnant; the state of being with young. A period of approximately 9 months for humans.

Quindecennial

A period of 15 years.

Quinquennial

Occurring once in five years, or at the end of every five years; also, lasting five years. A quinquennial event.

Second — s

The sixtieth part of a minute of time.

Septennial

Lasting or continuing seven years; as, septennial parliaments.

Week

A period of seven days, usually that reckoned from one Sabbath or Sunday to the next. Also seven nights, known as sennight.

Year — a

The time of the apparent revolution of the sun trough the ecliptic; the period occupied by the earth in making its revolution around the sun, called the astronomical year; also, a period more or less nearly agreeing with this, adopted by various nations as a measure of time, and called the civil year; as, the common lunar year of 354 days, still in use among the Mohammedans; the year of 360 days, etc. In common usage, the year consists of 365 days, and every fourth year (called bissextile, or leap year) of 366 days, a day being added to February on that year, on account of the excess above 365 days.

Year (anomalistic)

The time of the earth's revolution from perihelion to perihelion again, which is 365 days, 6 hours, 13 minutes, and 48 seconds.

Year (common lunar)

The period of 12 lunar months, or 354 days.

Year (embolismic/intercalary lunar)

The period of 13 lunar months, or 384 days.

Year (leap/bissextile)

Bissextile; a year containing 366 days; every fourth year which leaps over a day more than a common year, giving to February twenty-nine days.

Note: Every year whose number is divisible by four without a remainder is a leap year, excepting the full centuries, which, to be leap years, must be divisible by 400 without a remainder. If not so divisible they are common years. 1900, therefore, is not a leap year.

Year (lunar astronomical)

The period of 12 lunar synodical months, or 354 days, 8 hours, 48 minutes, 36 seconds.

Year (lunisolar)

A period of time, at the end of which, in the Julian calendar, the new and full moons and the eclipses recur on the same days of the week and month and year as in the previous period. It consists of 532 common years, being the least common multiple of the numbers of years in the cycle of the sun and the cycle of the moon.

Year (sabbatical)

Every seventh year, in which the Israelites were commanded to suffer their fields and vineyards to rest, or lie without tillage.

Year (sidereal)

The time in which the sun, departing from any fixed star, returns to the same. This is 365 days, 6 hours, 9 minutes, and 9.3 seconds.

Year (sothic)

The Egyptian year of 365 days and 6 hours, as distinguished from the Egyptian vague year, which contained 365 days. The Sothic period consists of 1,460 Sothic years, being equal to 1,461 vague years. One of these periods ended in July, a.d. 139.

Year (tropic)

The solar year; the period occupied by the sun in passing from one tropic or one equinox to the same again, having a mean length of 365 days, 5 hours, 48 minutes, 46.0 seconds, which is 20 minutes, 23.3 seconds shorter than the sidereal year, on account of the precession of the equinoxes.

Torque

Centimeter gram	cm·g
Dyne centimeter	dyne·cm
Foot ounce	oz·ft
Foot poundal	
Foot pounds	lbf·ft
Inch ounces	in·oz
Inch pounds	in·lb
Joules	J
Kilo newton meter	kN·m
Kilogram meter	kg·m
Kip	

One thousand inch pounds.

Mega newton meter	MN·m
Meter kilopond	mkp
Micro newton meter	µN·m
Milli newton meter	mN·m
Newton centimeter	N·cm
Newton meter	N·m

A newton metre is a unit of torque (also called "moment") in the SI system. The symbolic form is N m or N·m.

One newton metre, sometimes hyphenated newton-metre, is equal to the torque resulting from a force of one newton applied perpendicularly to a moment arm which is one metre long.

Viscocity (Dynamic)

Centipoise	cP
Micropascal-second	µPa·s
Microreyn	
Millipascal-second	mPa·s
Pascal-second	Pa·s
Poise	P

The poise (symbol P, /ˈpɔɪz/) is the unit of dynamic viscosity in the centimetre gram second system of units. It is named after Jean Louis Marie Poiseuille (22 April 1797 – 26 December 1869) who was a French physician and physiologist.

The analogous unit in the International System of Units is the pascal second (Pa·s).

Reyn

In fluid dynamics, the Reyn is a British unit of dynamic viscosity. Named in honour of Osbourne Reynolds (23 August 1842 – 21 February 1912) who was a prominent Anglo-Irish innovator in the understanding of fluid dynamics.

One Reyn is: 1 lbf·sec·incheso^{-2}. Relation between Reyn and centipoise is approximately: 6.89476 × 10^6 centipoise

Viscosity (Kinematic)

Centistokes	cSt
Square centimetre per second	cm²/s
Square foot per second	ft²/s
Square meter per second	m²/s
Square millimeter per second	mm²/s
Stokes	St

The stokes (ST) is the cgs physical unit for kinematic viscosity, named after George Gabriel Stokes. It is sometimes expressed in terms of centistokes (cSt). The SI unit of kinematic viscosity is m2/s.

1 St = 1 cm2·s−1 = 10−4 m2·s−1.

1 cSt = 1 mm2·s−1 = 10−6m2·s−1.

Water at 20 °C has a kinematic viscosity of about 1 cSt.

Sir George Gabriel Stokes, 1st Baronet FRS (13 August 1819 – 1 February 1903), was a mathematician, physicist, politician and theologian.

Volume and Dry Capacity

Board foot

Lumber 1ft² and 1 in thick.

Bushel (UK/Canada)

A dry measure, containing four pecks, eight gallons, or thirty-two quarts.

The Winchester bushel, formerly used in England, contained 2150.42 cubic inches, being the volume of a cylinder 181/2 inches in internal diameter and eight inches in depth. The standard bushel measures, prepared by the United States Government and distributed to the States, hold each 77.6274 pounds of distilled water, at 39.8 deg Fahrenheit and 30 inches atmospheric pressure, being the equivalent of the Winchester bushel. The imperial bushel now in use in England is larger than the Winchester bushel, containing 2218.2 cubic inches, or 80 pounds of water at 62º Fahrenheit.

Bushel (US)

A dry measure, containing four pecks, eight gallons, or thirty-two quarts. The Winchester bushel, formerly used in England, contained 2150.42 cubic inches, being the volume of a cylinder 181/2 inches in internal diameter and eight inches in depth. The standard bushel measures, prepared by the United States Government and distributed to the States, hold each 77.6274 pounds of distilled water, at 39.8 deg Fahrenheit and 30 inches atmospheric pressure, being the equivalent of the Winchester bushel. The imperial bushel now in use in England is larger than the Winchester bushel, containing 2218.2 cubic inches, or 80 pounds of water at 62º Fahrenheit.

Coomb

British unit equivalent to 4 bushels.

Cord

A pile of wood 8ft x 4ft x 4ft.

Cubic decimeter	dm^3
Cubic foot	ft^3
Cubic inch	in^3
Cubic meter	m^3
Cubic yard	yd^3
Gallon (Canadian)	gal
Gallon (US, dry)	gal
Litre	l/L

A measure of capacity in the metric system, being a cubic decimeter.

Peck

The fourth part of a bushel; a dry measure of eight quarts.

Peck (UK/Can)	
Peck (US)	
Pint (US, dry)	pt
Quart (Can)	
Quart (US, dry)	
Quart (dry)	

The fourth part of a gallon; the eighth part of a peck; two pints.

Note: In imperial measure, a quart is forty English fluid ounces; in wine measure, it is thirty-two American fluid ounces. The United States dry quart contains 67.20 cubic inches, the fluid quart 57.75. The English quart contains 69.32 cubic inches.

Volume and Liquid Capacity

Acetabulum

Roman unit.

Barrel (UK)

36 UK Gallons.

Barrel(US federal)

31 US Gallons.

Barrel (US)

31.5 US Gallons.

Barrel of oil (US)

Barrel of petroleum (oil). 42 US Gallons.

Barrel of wine (UK)

31.5 UK Gallons.

Bath/bu

Israeli unit.

Cab

Israeli unit.

Cados (Greek)

Greek unit.

Cántaro

Spanish unit.

Caphite

Ancient Arabian unit.

Cotula/hemina/kotyle

Greek unit.

Cubic centimeter	cm^3
Cubic decimeter	dm^3
Cubic foot	ft^3
Cubic inch	in^3
Cubic meter	m^3
Cubic yard	yd^3
Cup (UK)	
Cup (US)	

Ciathos

Greek unit.

Dash (UK)

Equivalent to one half of a pinch.

Dash (US)

Fluid ounce (UK)

Contains 1 ounce mass of distilled water at 62°F, and barometer at 30 inches.

Fluid ounce (US)

Gallon (UK)

A measure of capacity, containing four quarts; used, for the most part, in liquid measure, but sometimes in dry measure. The English imperial gallon contains 10 pounds avoirdupois of distilled water at 62°F, and barometer at 30 inches, equal to 277.274 cubic inches.

Gallon (US)

A measure of capacity, containing four quarts; used, for the most part, in liquid measure, but sometimes in dry measure.

Note: The standart gallon of the Unites States contains 231 cubic inches, or 8.3389 pounds avoirdupois of distilled water at its maximum density,and with the barometer at 30 inches. This is almost exactly equivalent to a cylinder of seven inches in diameter and six inches in height, and is the same as the old English wine gallon. The beer gallon, now little used in the United States, contains 282 cubic inches.

Hekat

Israeli unit.

Litre l/L

The litre (American spelling: liter; SI symbols l or L) is a non-SI metric system unit of volume equal to 1 cubic decimetre (dm^3), 1,000 cubic centimetres (cm^3) or 1/1,000 cubic metre.

Metertes/amphura

Greek unit.

Mil

Equal to one thousandth of a liter syn: milliliter, millilitre, ml, cubic centimeter, cubic centimeter, cc.

Millilitre ml

Equal to one thousandth of a liter syn: milliliter, millilitre, ml, mil, cubic centimeter, cubic centimeter, cc.

Minim

Used in Pharmaceutical to represent one drop. 1/60 fluid dram or 1/480 fluid ounce.A U.S. minim is about 0.003760 in^3 or 61.610 µl. The British minim is about 0.003612 in^3 or 59.194 µl.Origin of the word is from the Latin minimus, or small.

Mushti

Indian unit.

Oxybaphon

Greek unit.

Pinch (UK)

One eigth of a teaspoon.

Pinch (US)

One eigth of a teaspoon.

Pint (UK) pt/p

The imperial pint is equal to one eighth of an imperial gallon.

Pint (US) pt/p

The United States liquid pint is equal to one eighth of a United States liquid gallon. It is used commonly in the United States.

Quart (UK)

The fourth part of a gallon; the eighth part of a peck; two pints.

Note: In imperial measure, a quart is forty English fluid ounces; in wine measure, it is thirty-two American fluid ounces. The United States dry quart contains 67.20 cubic inches, the fluid quart 57.75. The English quart contains 69.32 cubic inches.

Quart(US)

The fourth part of a gallon; the eighth part of a peck; two pints.

Note: In imperial measure, a quart is forty English fluid ounces; in wine measure, it is thirty-two American fluid ounces. The United States dry quart contains 67.20 cubic inches, the fluid quart 57.75. The English quart contains 69.32 cubic inches.

Shaku

A Japanese unit of volume, the shaku equals about 18.04 milliliters (0.61 U.S. fluid ounce).

Note: shaku also means area and length.

Tablespoon (UK)

One sixteenth of a cup. A spoon of the largest size commonly used at the table; distinguished from teaspoon, dessert spoon, etc.

Tablespoon (US)

One sixteenth of a cup. A spoon of the largest size commonly used at the table; distinguished from teaspoon, dessert spoon, etc.

Teaspoon (UK)

One third of a tablespoon. A small spoon used in stirring and sipping tea, coffee, etc., and for other purposes.

Teaspoon (US)

One third of a tablespoon. A small spoon used in stirring and sipping tea, coffee, etc., and for other purposes.