Time Units

Source: http://conversion.org/time/

Help:
≡exactly equal
≈approximately equal to
1E+12 = 1×10^{12}

Unit Name	type	symbol	definition	in s fraction	in s	Description
nanoseconds		ns	≡ 10^{-9} s		0.000000001	billionth part or a second
microsecond		µs	≡ 10^{-6} s		0.000001	millionth part of a second
millisecond		ms	≡ 0.001 s		0.001	thousandth of second
second	metric	s	≡ 1 s		1	SI base unit. The second is the duration of 9 192 631 770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the cesium 133 atom at 0 K temperature.
kiloseconds		ks	≡ 10^{3} s		1000	a thousand times of a second
megaseconds		Ms	≡ 10^{6} s		1000000	one million seconds
gigaseconds		Gs	≡ 10^{9} s		1000000000	one billion seconds
teraseconds		Ts	≡ 10^{12} s		1E+12	a trillion-seconds
atomic unit of time		au	≡ a0/(α·c)		2.41888E-17	This is the smallest meaningful time unit under which an electron takes a circle on the first Bohr pitch divided by 2π.
Callippic cycle			≡ 76 years (Julian)		2398377600	One callippic cycle is equal to 441 mo (hollow) + 499 mo (full) = 76 a of 365.25 d = 2.3983776 Gs
century		c	≡ 100 years (Gregorian)		3155695200	= 365.2425 × 100 × 86400 seconds
day		d	= 24 h = 1440 min		86400	One day (solar day) is period of time from noon to noon = 24 hours. A solar day is the time it takes for the Earth to rotate about its axis so that the Sun appears in the same position in the sky. 24 [h] × 3600 [s] = 86.4 [ks] = 86400 [s]
day (sidereal)		d (sidereal)	≈ 23 h, 56 min, 4.0916 sec		86164.09053083288	A sidereal day is the time needed for the Earth to rotate once around its axis so that the distant stars appear in the same position in the sky. This is ~4 minutes shorter than the solar day.
decade		dec	≡ 10 years (Gregorian)		315569520	= 365.2425 × 10 × 86400 seconds
fortnight		fn	≡ 2 wk		1209600	A fortnight is a unit of time equal to 14 days (2 weeks) = fourteen nights
helek	Hebrew		≡ 1⁄1080 h	3600/1080	3.333333333	The helek (or chelek) is a unit of time used in the calculation of the Hebrew calendar. 3600 s / 1080
Hipparchic cycle			≡ 4 Callippic cycles - 1 d		9593424000	A lunar cycle noticed by Hipparchus. Eric Weisstein's World of Biography It consists of four Callipic cycles less a day, in which (4 × 27759 - 1) days are very nearly 3760 months, ≡ 9.593424 Gs
hour		h	≡ 60 min		3600	One hour is a time required for minute hand on analog clock to create a circle = 3.6 ks
jiffy		j	≡ 1⁄60 s	1/60	0.016666667	Jiffy is an informal term for any unspecified short period of time. Common 1/60 s (alternative 1/100 s)

ke	Chinese		≡ 1⁄100 d = 14.4 min		864	Traditional **ke** is unit of time in the traditional time system in ancient China. = 14.4 min = 14 min, 24 sec = 864 s
lustre; lustrum			≡ 5 years (of 365 d)		157680000	A lustre is a period of five years. Its use dates back to Ancient Rome, when a lustrum was a five-year period at the end of which a full census of the Roman population would be carried out. = 5*365*86400 = 157.68 Ms
Metonic cycle; enneadecaeteris			≡ 6940 d		599616000	For astronomy and calendar studies, the Metonic cycle or Enneadecaeteris is a period of very close to 19 years that is nearly a common multiple of the solar year and the synodic month. ≡ 110 mo (hollow) + 125 mo (full) = 6940 d ≈ 19 a = 599.616 Ms
millennium			≡ 1000 years (Gregorian)		31556952000	A thousand Gregorian years = 365.2425 × 1000 × 86400 s = 31.556952 Gs
milliday		md	≡ 1⁄1000 d		86.4	One thousandth of a day = 86400/1000
minute		min	≡ 60 s		60	One minute is a time equal to rotation time of sweep (or second) hand at analog clock = 60 s
moment			≡ 90 s		90	Time unit used in the Middle Ages. 1 hour on sundial was divided into 40 parts = moments. 3600/40 = 90 s
month (full)		mo	≡ 30 d		2592000	Full month = 30 days × 86400 sec.
month (Gregorian average)		mo	= 30.436875 d		2629746	Average Gregorian month is calculated from average Gregorian Year divided by 12 month: 365.2425 days / 12 months × 86400 sec ≈ 2.6297 Ms
month (hollow)		mo	≡ 29 d		2505600	Hollow month = 29 days × 86400 sec.
month (synodic)		mo	≈ 29.530589 days		2551442.89	Synodic month = Cycle time of moon phases (example, from fool moon to next fool moon). This period is not constant and it is longer than moon rotation around Earth (sidereal month), because moon and Earth moves together around the Sun.
month (sidereal)			≈ 27.321661 days		2360591.51	It is the time it takes the Moon to go around Earth measured from a fixed point. Sideric month is not completely constant, an average value has been used for calculating.
octaeteris			= 2922 d		252460800	In astronomy, an octaeteris is the period of eight solar years after which the moon phase occurs on the same day of the year plus one or two days. = 48 mo (full) + 48 mo (hollow) + 3 mo (full) = 8 a of 365.25 d = 2922 d = 252.4608 Ms
Planck time			≡ (G*ħ*/c5)½		5.39116E-44	It is the time required for light to travel in a vacuum a distance of 1 Planck length, approximately 5.39×10^{-44} s.
shake			≡ 10^{-8} s		0.00000001	A shake is an informal unit of time equal to 10 nanoseconds (ns), or 10^{-8} seconds. It has applications in nuclear physics, helping to conveniently express the timing of various events in a nuclear explosion.
sigma			≡ 10^{-6} s		0.000001	Unit of time equal to one microsecond (1 μs) or 10^{-6} seconds.
Sothic cycle			≡ 1461 a of 365 d		46074096000	The Sothic cycle or Canicular period is a period of 1,461 Egyptian civil years of 365 days each or 1,460 Julian years (365.25 days each) = 1461×365×86400 [s] = 46.074096 [Gs]
svedberg		S	≡ 10^{-13} s		1E-13	The svedberg is actually a measure of time; it is defined as exactly 10^{-13} seconds (100 fs). It is often used to reflect the rate at which a molecule travels to the bottom of a test tube under the centrifugal force of a centrifuge.
week		wk	≡ 7 d = 168 h = 10080 min		604800	Week is a period of seven consecutive days (calendar week usually starts on Sunday in North America or Monday in Europe). One week consists seven days or 168 hours.
year (common)		a, y, or yr	365 d		31536000	The year commonly has 365 days (except the leap year)
year (Gregorian)		a, y, or yr	= 365.2425 d average		31556952	As the common year has 365 days, the Gregorian calendar with leap years compensate the deviation from the real, astronomical year. According to this calendar, every 4th year is a leap year, except for every 100th. But every 400th is a leap year. This means that there are 97 leap years in 400 year period. So according to Gregorian's calendar, one year has 365 + 97/400 days (average). This is not a perfect approach, but in 1000 year

						period, the defiation is only 0.3 days compared to the astronomical year. In the year 1582 Gregorian replaced the Julian calendar.
year (Julian)		a, y, or yr	= 365.25 d average		31557600	The basic calendar year has 365 days, but in fact the Earth needs a little more time around the sun. The Julian calendar compensated this with leap year (every fourth year had 366 days). According to the formula, a Julian year has 365 + 1/4 = 365.25 days. But even with this compensation, the astronomical year slip 0.78 days every 100 years into real seasons. Therefore, most countries have moved to the Gregorian calendar introduced in 1582.
year (leap)		a, y, or yr	= 366 d		31622400	Leap year has 366 days. The role of leap year is to compensate difference from astronomical- and common calendar year.
year (mean tropical)		a, y, or yr	≈ 365.242190402 d		31556925.25	Tropical year is the length of time it takes for the Sun to return to the same position in the cycle of seasons, approximately 365.24219 days
year (sidereal)		a, y, or yr	≈ 365.256363004 d		31558149.76	Sidereal year is a time taken for Sun to return to the same position with respect to the stars of the celestial sphere, approximately 365.256363 days.
blink			≈ 0.25 s		0.25	Human blink duration ranges from 0.1 to 0.4 seconds. Blink time is calculated as average of this range, and this value is a quarter of a second.