

Length Units

source: <http://conversion.org/length/>

Help:

≡ exactly equal

≈ approximately equal to

1E5 = 1×10^5

unit name	type	symbol	definition	in metres fraction	in metres	Description
pikometre	metric	pm	= 1×10^{-12} m		1E-12	
nanometre	metric	nm	= 1×10^{-9} m		0.000000001	
micrometre	metric	µm	= 1×10^{-6} m		0.000001	
millimetre	metric	mm	= 1×10^{-3} m		0.001	
centimetre	metric	cm	= 1×10^{-2} m		0.01	
decimetre	metric	dm	= 10^{-1} m		0.1	
metre	metric	m	=1 m		1	Distance light travels in $\frac{1}{299792458}$ of a second in vacuum. Old def: $\frac{1}{10000000}$ of the distance from equator to pole.
dekametre	metric	dam	=10 m		10	
hectometre	metric	hm	=100 m		100	
kilometre	metric	km	=1000 m		1000	
ångström	metric	Å	≡ 1×10^{-10} m		1E-10	≡ 0.1 nm
astronomical unit		AU	≡ 149597870700 m		149597870700	≈ Distance from Earth to Sun
barleycorn			= $\frac{1}{3}$ in	254/30000	8.46666666666667E-03	of chiefly historical interest
bohr, atomic unit of length		a_0	= Bohr radius of hydrogen		5.29177210671212E-11	
cable length (imperial)			≡ 608 ft	608×0.3048	185.3184	
cable length (International)			≡ $\frac{1}{10}$ nmi	1852/10	185.2	
cable length (US)			≡ 720 ft	720×0.3048	219.456	
chain		ch	≡ 66 ft (US) ≡ 4 rods	79200/3937	2.01168402336805E+01	(Chain - Gunter's; Surveyor's)
cubit			≈ 18 in		0.4572	≡ Distance from fingers to elbow, ≈ 18 in, of chiefly historical interest

ell		ell	≡ 45 in (In England usually)	45×0.0254	1.143	of chiefly historical interest
fathom		ftm	≡ 6 ft	6×0.3048	1.8288	
fermi		fm	≡ 1×10^{-15} m		1E-15	
finger			≡ $\frac{7}{8}$ in	1778/80000	0.022225	
finger (cloth)			≡ 4 $\frac{1}{2}$ in		0.1143	
foot (Benoît)		ft (Ben)	≈ 0.304799735		0.304799735	of chiefly historical interest
foot (Cape)			1.033 ft	1.033×0.3048	0.3148584	Legally defined as 1.033 English feet in 1859 . It's of chiefly historical interest
foot (Clarke's)		ft (Cla)	≈ 0.3047972654		0.304797265	of chiefly historical interest
foot (Indian)		ft Ind	≈ 0.304799514		0.304799514	of chiefly historical interest
foot, metric		mf	≡ $\sqrt{\frac{1}{10}}$ m		3.16227766016838E-01	
foot, metric (long)		lmf	≡ $\frac{1}{3}$ m	1/3	3.33333333333333E-01	
foot, metric (short)		smf	≡ 0.30 m		0.3	
foot (International)		ft	≡ 0.3048 m ≡ $\frac{1}{3}$ yd ≡ 12 inches		0.3048	
foot (Sear's)		ft (Sear)	≈ 0.30479947		0.30479947	of chiefly historical interest
foot (US Survey)		ft (US)	≡ $\frac{1200}{3937}$ m	1200/3937	3.04800609601219E-01	
french; charriere		F	≡ $\frac{1}{3}$ mm	1/3000	3.33333333333333E-04	
furlong		fur	≡ 10 chains = 660 ft = 220 yd	660*0.3048	201.168	
hand			≡ 4 in	4*0.0254	0.1016	
inch (International)		in	≡ 2.54 cm ≡ $\frac{1}{36}$ yd ≡ $\frac{1}{12}$ ft		0.0254	
league (land)		lea	3 Statute miles = 5280 foot (US Survey)	19008000/3937	4.82804165608331E+03	≈ 1 hour walk, Currently defined in US as 3 Statute miles, but historically varied from 2 to 9 km
light-day			≡ 24 light-hours		25902068371200	
light-hour			≡ 60 light-minutes		1079252848800	
light-minute			≡ 60 light-seconds		17987547480	
light-second			≡ Distance light travels in one second in vacuum		299792458	
light-year		ly	≡ Distance light travels in vacuum in 365.25 days		9460730472580800	
line		ln	≡ $\frac{1}{12}$ in	254/120000	2.11666666666667E-03	
link (Gunter's; Surveyor's)		lnk	≡ $\frac{1}{100}$ ch ≡ 0.66 ft (US) ≡ 7.92 in	0.66*0.3048	0.201168	
link (Ramsden's; Engineer's)		lnk	≡ 1 ft		0.3048	
mickey			≡ $\frac{1}{200}$ in	254/2000000	0.000127	

micron		μ	$\equiv 1 \times 10^{-6} \text{ m}$		0.000001	Old name for micrometre
mil; thou		mil	$\equiv 1 \times 10^{-3} \text{ in}$	254/10000000	0.0000254	
mil (Sweden and Norway)		mil	$\equiv 10 \text{ km}$		10000	
mile (geographical)			$\equiv 6082 \text{ ft}$		1853.7936	of chiefly historical interest
mile (international)		mi	$\equiv 80 \text{ chains} \equiv 5280 \text{ ft} \equiv 1760 \text{ yd}$		1609.344	
mile (tactical or data)			$\equiv 6000 \text{ ft}$		1828.8	
mile (telegraph)		mi	$\equiv 6087 \text{ ft}$		1855.3176	of chiefly historical interest
mile (US Survey)		mi	$\equiv 5280 \text{ US Survey feet} \equiv (5280 \times 1200/3937) \text{ m}$	6336000/3937	1.60934721869444E+03	
nail (cloth)			$\equiv 2 \frac{1}{4} \text{ in}$		0.05715	
nautical league		NL; nl	$\equiv 3 \text{ nmi}$		5556	
nautical mile (Admiralty)		NM (Adm); nmi (Adm)	$\equiv 6080 \text{ ft}$		1853.184	
nautical mile (international)		NM; nmi	$\equiv 1852 \text{ m}$		1852	
nautical mile (US pre 1954)			$\equiv 1853.248 \text{ m}$		1853.248	
pace			$\equiv 2.5 \text{ ft}$		0.762	
palm			$\equiv 3 \text{ in}$		0.0762	
parsec		pc	$\approx 3.085677581 \times 10^{16}$		3.085677581E+16	Distance of star with parallax shift of one arc second from a base of one astronomical unit
pica (PostScript)			$\equiv 12 \text{ points}$	254/60000	4.23333333333333E-03	
point (American, English)		pt	$\equiv \frac{1}{72} \cdot 272 \text{ in}$	254/722720	3.51450077485056E-04	
point (Didot; European)		pt	$\equiv \frac{5}{133} \text{ cm}$	5/13300	3.75939849624060E-04	Defined after 1878 as $5/133 \text{ cm} \approx 0.00037593985 \text{ m}$
point (PostScript)		pt	$\equiv \frac{1}{72} \text{ in}$	254/720000	3.52777777777778E-04	
point (TeX)		pt	$\equiv \frac{1}{72} \cdot 27 \text{ in}$	254/722700	3.51459803514598E-04	
quarter			$\equiv \frac{1}{4} \text{ yd}$		0.2286	
rod; pole; perch		rd	$\equiv 16 \frac{1}{2} \text{ ft}$		5.0292	of chiefly historical interest
rope		rope	$\equiv 20 \text{ ft}$		6.096	of chiefly historical interest
shaku (Japan)			$\equiv 10/33 \text{ m}$	10/33	3.03030303030303E-01	
span			$\equiv 9 \text{ in}$		0.2286	of chiefly historical interest
spat			10^{12} m		1E+12	

stick			≡ 2 in		0.0508	of chiefly historical interest
picometre (old: bicon, stigma)		pm	10^{-12} m		1E-12	
twip		twp	≡ $\frac{1}{1440}$ in	254/14400000	1.76388888888889E-05	
x unit; siegbahn		xu	$\approx 1.0021 \times 10^{-13}$		1.0021E-13	
yard (International)		yd	≡ 0.9144 m ≡ 3 ft ≡ 36 in		0.9144	
zoll		"	≡ 1 inch ≡ 25.4 mm		0.0254	Zoll is length unit used in German-speaking countries, equivalent to inch = 0.0254 m (since 1956).