

Using default US units Units.xml

Length Units Validation:

a:= 1 <i>ft</i>	b:= 1 <i>m</i>	
a= 1 <i>ft</i>	b= 3.28084 <i>ft</i>	<- unconverted
a= 0.000189 <i>mi</i>	b= 0.000621 <i>mi</i>	
a= 0.000305 <i>km</i>	b= 0.001 <i>km</i>	
a= 0.3048 <i>m</i>	b= 1 <i>m</i>	
a= 3.048 <i>dm</i>	b= 10 <i>dm</i>	
a= 30.48 <i>cm</i>	b= 100 <i>cm</i>	
a= 304.8 <i>mm</i>	b= 1000 <i>mm</i>	
a= 3.048·10 ⁵ <i>μm</i>	b= 1·10 ⁶ <i>μm</i>	
a= 3.048·10 ⁸ <i>nm</i>	b= 1·10 ⁹ <i>nm</i>	
a= 3.048·10 ¹¹ <i>pm</i>	b= 1·10 ¹² <i>pm</i>	
a= 3.048·10 ⁹ <i>Angstrom</i>	b= 1·10 ¹⁰ <i>Angstrom</i>	
a= 5.759885·10 ⁹ <i>bohr</i>	b= 1.889726·10 ¹⁰ <i>bohr</i>	
a= 0.001515 <i>furlong</i>	b= 0.004971 <i>furlong</i>	
a= 12 <i>in</i>	b= 39.370079 <i>in</i>	
a= 0.333333 <i>yd</i>	b= 1.093613 <i>yd</i>	
a= 0.179104 <i>Smoot</i>	b= 0.587613 <i>Smoot</i>	

Area Units Validation:

a:= 1 <i>ft</i> ²	b:= 1 <i>m</i> ²
a= 1 <i>ft</i> ²	b= 10.76391 <i>ft</i> ²
a= 0.092903 <i>m</i> ²	b= 1 <i>m</i> ²
a= 2.295684·10 ⁻⁵ <i>acre</i>	b= 0.000247 <i>acre</i>

a = $9.290304 \cdot 10^{-6}$ *hectare* b = 0.0001 *hectare*

Volume Units Validation:

a := 1 *ft*³

b := 1 *m*³

a = 1 *ft*³

b = 35.314667 *ft*³ <- unconverted

a = 28.316847 *L*

b = 1000.000001 *L*

a = $2.831685 \cdot 10^7$ *mL*

b = $1 \cdot 10^9$ *mL*

a = 7.480519 *gal*

b = 264.172051 *gal*

Mass Units Validation:

a := 1 *lb*

b := 1 *kg*

a = 1 *lb*

b = 2.204623 *lb* <- unconverted

a = 0.453592 *kg*

b = 1 *kg*

a = 0.000454 *Mg*

b = 0.001 *Mg*

a = 0.000454 *t*

b = 0.001 *t*

a = 0.0005 *ton*

b = 0.001102 *ton*

a = 453.59237 *gm*

b = 1000 *gm*

a = $4.535924 \cdot 10^5$ *mg*

b = $1 \cdot 10^6$ *mg*

a = $4.535924 \cdot 10^8$ *µg*

b = $1 \cdot 10^9$ *µg*

a = 16 *oz*

b = 35.273962 *oz*

a = 0.031081 *slug*

b = 0.068522 *slug*

Force Unit Validation:

a := 1 *lbf*

b := 1 *N*

a = 1 *lbf*

b = 0.224809 *lbf* <- unconverted

a = 4.448222 *N*

b = 1 *N*

a = $4.448222 \cdot 10^{-12}$ *TN*

b = $1 \cdot 10^{-12}$ *TN*

$$a = 4.448222 \cdot 10^{-9} \text{ GN} \quad b = 1 \cdot 10^{-9} \text{ GN}$$

$$a = 4.448222 \cdot 10^{-6} \text{ MN} \quad b = 1 \cdot 10^{-6} \text{ MN}$$

$$a = 0.0044448 \text{ kN} \quad b = 0.001 \text{ kN}$$

$$a = 4448.221617 \text{ mN} \quad b = 1000 \text{ mN}$$

$$a = 4.448222 \cdot 10^6 \text{ } \mu\text{N} \quad b = 1 \cdot 10^6 \text{ } \mu\text{N}$$

$$a = 4.448222 \cdot 10^5 \text{ dyn} \quad b = 1 \cdot 10^5 \text{ dyn}$$

$$a = 0.453592 \text{ kgf} \quad b = 0.101972 \text{ kgf}$$

$$a = 0.000454 \text{ tonnef} \quad b = 0.000102 \text{ tonnef}$$

$$a = 0.0005 \text{ tonf} \quad b = 0.000112 \text{ tonf}$$

$$a = 0.001 \text{ kip} \quad b = 0.000225 \text{ kip}$$

Pressure Units Validation:

$$a := 1 \text{ psf} \quad b := 1 \text{ Pa}$$

$$a = 1 \text{ psf} \quad b = 0.020885 \text{ psf} \quad \leftarrow \text{unconverted}$$

$$a = 47.88026 \text{ Pa} \quad b = 1 \text{ Pa}$$

$$a = 4.788026 \cdot 10^{-8} \text{ GPa} \quad b = 1 \cdot 10^{-9} \text{ GPa}$$

$$a = 4.788026 \cdot 10^{-5} \text{ MPa} \quad b = 1 \cdot 10^{-6} \text{ MPa}$$

$$a = 0.04788 \text{ kPa} \quad b = 0.001 \text{ kPa}$$

$$a = 0.000473 \text{ atm} \quad b = 9.869233 \cdot 10^{-6} \text{ atm}$$

$$a = 0.000479 \text{ bar} \quad b = 1 \cdot 10^{-5} \text{ bar}$$

$$a = 0.359131 \text{ torr} \quad b = 0.007501 \text{ torr}$$

$$a = 0.006944 \text{ psi} \quad b = 0.000145 \text{ psi}$$

$$a = 6.944444 \cdot 10^{-6} \text{ ksi} \quad b = 1.450377 \cdot 10^{-7} \text{ ksi}$$

$$a = 0.001 \text{ ksf} \quad b = 2.088543 \cdot 10^{-5} \text{ ksf}$$

Energy Units Validation:

a:= 1 *BTU*b:= 1 *J*a= 778.169262 *ft lbf*b= 0.737562 *ft lbf* <- unconverteda= 1055.055853 *J*b= 1 *J*a= 1.055056 · 10⁻⁹ *TJ*b= 1 · 10⁻¹² *TJ*a= 1.055056 · 10⁻⁶ *GJ*b= 1 · 10⁻⁹ *GJ*a= 0.001055 *MJ*b= 1 · 10⁻⁶ *MJ*a= 1.055056 *kJ*b= 0.001 *kJ*a= 1.055056 · 10⁶ *mJ*b= 1000 *mJ*a= 251.995761 *cal*b= 0.238846 *cal*a= 0.251996 *kcal*b= 0.000239 *kcal*a= 1.055056 · 10¹⁰ *erg*b= 1 · 10⁷ *erg***Power Units Validation:**a:= 1 *hp*b:= 1 *W*a= 550 $\frac{\text{ft lbf}}{\text{s}}$ b= 0.737562 $\frac{\text{ft lbf}}{\text{s}}$ <- unconverteda= 745.699872 *W*b= 1 *W*a= 7.456999 · 10⁻⁷ *GW*b= 1 · 10⁻⁹ *GW*a= 0.000746 *MW*b= 1 · 10⁻⁶ *MW*a= 0.7457 *kW*b= 0.001 *kW*a= 7.456999 · 10⁵ *mW*b= 1000 *mW*a= 7.456999 · 10⁸ *μW*b= 1 · 10⁶ *μW*a= 7.456999 · 10¹¹ *nW*b= 1 · 10⁹ *nW*a= 7.456999 · 10¹⁴ *pW*b= 1 · 10¹² *pW*

Velocity Units Validation:

$$a := 1 \frac{ft}{sec}$$

$$b := 1 \text{ kph}$$

$$a = 1 \frac{ft}{s}$$

$$b = 0.911344 \frac{ft}{s} \quad \leftarrow \text{ unconverted}$$

$$a = 0.592484 \text{ knot}$$

$$b = 0.539957 \text{ knot}$$

$$a = 1.09728 \text{ kph}$$

$$b = 1 \text{ kph}$$

$$a = 0.681818 \text{ mph}$$

$$b = 0.621371 \text{ mph}$$

Constants Validation:

$$c = 9.835711 \cdot 10^8 \frac{ft}{s}$$

$$g = 32.1737 \frac{ft}{s^2}$$