

# Dimensional Analysis Conversions

## U. S. Customary System

1 yd = 3 ft  
1 ft = 12 in  
1 mi = 5,280 ft  
1 lb = 16 oz (weight)  
1 ton (T) = 2000 lb  
1 cup = 8 oz (capacity)  
1 cup = 16 tbs  
1 tbs = 3 tsp

1 pt = 2 cups  
1 qt = 2 pt  
1 gal = 4 qt  
1 acre = 43,560 ft<sup>2</sup>  
1 ft<sup>2</sup> = 144 in<sup>2</sup>  
1 yd<sup>2</sup> = 9 ft<sup>2</sup>  
1 ft<sup>3</sup> ≅ 7.48 gal

## Metric System

1 m = 1000 mm  
1 m = 100 cm  
1 m = 10 dm  
1 km = 1000 m  
1 cm = 10 mm  
1 ton (t) = 1000 kg  
1 kg = 1000 g

1 g = 1000 mg  
1 g = 1,000,000 mcg  
1 L = 1000 mL  
1 hectare = 10,000 m<sup>2</sup>  
1 cm<sup>3</sup> = 1 mL = 1 cc  
1 m<sup>3</sup> = 1000L

## Conversions Between the U. S. & Metric System

1 in = 2.54 cm  
1 m ≅ 39.37 in  
1 m ≅ 3.281 ft  
1 m ≅ 1.094 yd  
1 mi ≅ 1.609 km  
1 lb ≅ 453.6 g

1 oz ≅ 28.35 g  
1 kg ≅ 2.205 lb  
1 L ≅ 1.057 qt  
1 oz ≅ 29.57 mL  
1 tsp ≅ 5 mL

## Time Conversions

1 min = 60 sec  
1 hour = 60 min  
1 day = 24 hours  
1 week = 7 days

1 year = 365.25 days  
1 decade = 10 years  
1 century = 100 years

## Atypical Unit Conversions

1 chain = 66 ft  
1 furlong = 660 ft  
1 furlong = 10 chains  
1 rod = 16.5 ft  
1 league = 3 mi

1 fathom = 2 yd  
1 nautical mile ≅ 1.151 mi  
1 section = 640 acres  
1 acre-ft = 43,560 ft<sup>3</sup>  
1 fortnight = 2 weeks

## Temperature Conversions

Celsius to Fahrenheit:

$$F = \frac{9}{5} \cdot C + 32$$

Fahrenheit to Celsius:

$$C = \frac{5}{9} \cdot (F - 32)$$