

Formulas

Computing Volume

$$V = lwh$$

measured in cubic units

V stands for volume

l stands for length

w stands for width

h stands for height

Answers can be labeled cubic inches, cu. in., or in³ (change unit measurement accordingly)

Example: 23" x 14" x 5" = 1,610 cubic inches

Changing Cubic Inches to Cubic Feet

number of cubic inches \div 1728 = cubic feet or $\frac{\text{cubic inches}}{1728}$

Example: 5184 cu. in. \div 1728 = 3 cu. ft. $\frac{5184}{1728} = 3$ cu. ft.

Changing Cubic Feet to Cubic Meters

cubic feet x 0.02832 = cubic meters

Example: 15,552 cu. ft. x 0.02832 = 440.432 cubic meters

Converting Pounds to Kilos

pounds x 0.4536 = kilos

Example: 3,500 lb. x 0.4536 = 1,587.6 kilos

Converting Kilos to Metric Tons

kilos \div 1000 = metric tons or $\frac{\text{kilos}}{1000} = \text{metric tons}$

Example: 1,587.6 \div 1000 = 1.5876 metric tons

Developed by LBCC WpLRC

Calculating Dimensional Weight for International Cargo When Volume is in Cubic Inches

$$lwh \div 166 = \text{pounds} \quad \text{or} \quad \frac{lwh}{166} = \text{pounds}$$

Example: $392,431 \div 166 = 2,364.042$ dim wt in lbs = 2,364 pounds
(round pounds to nearest whole pound)

Calculating Dimensional Weight for International Cargo When Volume is in Cubic Centimeters

$$(lwh \div 6000) \times 2.20465 = \text{pounds} \quad \text{or} \quad \frac{lwh}{6000} \times 2.20465 = \text{pounds}$$

Example: $163,296 \text{ cu cm} \div 6000 = 27.216$ dim wt in kg (round to tenths place) = 27.2 kg
 $27.2 \times 2.20465 = 59.96$ lb (round up to nearest pound) = 60 lb

Calculating Dimensional Weight for Domestic Cargo

$$lwh \div 194 = \text{dim wt in lbs} \quad \text{or} \quad \frac{lwh}{194} = \text{dim wt in lbs}$$

Example: $1,152 \text{ cu in} \div 194 = 5.938$ lbs (round to nearest whole pound) = 6 lbs