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The Metric System

The Metric System Weights

Metric Denominations and Value*		Equivalents in Denominations in use	
Names	No. Grams	Quantity of water at maximum density	Avoirdupois weight
Millier or tonneau =	1,000,000 =	1 cubic meter =	2204.6 pounds
Quintal =	100,000 =	1 hectoliter =	220.46 pounds
Myriagram =	10,000 =	10 liters =	22.046 pounds
Kilogram or kilo =	1,000 =	1 liter =	2.2046 pounds
Hectogram =	100 =	1 deciliter =	3.5274 ounces
Dekagram =	10 =	10 c. centimeters =	0.3527 ounce
Gram =	1 =	1 c. centimeter =	15.432 grains
Decigram =	.1 =	.1 c. centimeter =	1.5432 grains
Centigram =	.01 =	10 c. millimeters =	0.1543 grain
Milligram =	.001 =	1 c. millimeter =	0.0154 grain

Measures Of Length

Metric Denominations and Values		Equivalents of Denominations In use	
Myriameter =	10,000 meters =	6.2137 miles	
Kilometer =	1,000 meters =	0.62137 mile, or 3,280 feet 10 inches	
Hectometer =	100 meters =	328 feet and 1 inch	
Dekameter =	10 meters =	393.7 inches	
Meter =	1 meter =	39.37 inches	
Decimeter =	.1 meter =	3.937 inches	
Centimeter =	.01 meter =	0.3937 inch	
Millimeter =	.001 meter =	0.0394 inch	

Measures Of Surface

Metric Denominations and Values		Equivalents of Denominations In use	
Hectare =	10,000 square meters =	2.471 acres	
Are =	100 square meters =	119.6 square yards	
Centare =	1 square meter =	1550 square inches	

Measures Of Capacity

Metric Denominations and Values			Equivalents of Denominations In use		
Names	No. Liters	Cubic Measure	Dry Measure	Wine Measure	
Kiloliter =	1,000 =	1 cubic meter =	1.308 cubic yards =	264.17 gallons	
Hectoliter =	100 =	.1 cubic meter =	2 bush. 3.35 pecks =	26.417 gallons	
Decaliter =	10 =	10 c. decimeters =	9.08 quarts =	2.6417 gallons	
Liter =	1 =	1 c. decimeter =	0.908 quart =	1.0567 quarts	
Deciliter =	.1 =	.1 c. decimeter =	6.1022 cubic inches =	0.845 gill	
Centiliter =	.01 =	10 c. centimeters =	0.6102 cubic inch =	0.338 fluid oz.	
Milliliter =	.001 =	1 c. centimeter =	0.061 cubic inch =	0.27 fluid oz.	

United States And Metric Constants

Note: To convert measures from United States to metric constants, reverse multiplication process to division, and division to multiplication, as necessary.

Long Measure
Millimeters x .03937 = inches
Millimeters / 25.4 = inches
Centimeters x .3937 = inches
Centimeters / 2.54 = inches
Meters x 39.37 = inches
Meters x 3.281 = feet
Meters x 1.094 = yards
Kilometers x .6214 = miles
Kilometers x 3280.8 = feet
Kilometers / 1.6093 = miles

Square Measure
Square millimeters x .00155 = square inches
Square millimeters / 645.2 = square inches
Square centimeters x .155 = square inches
Square centimeters + 6.452 = square inches
Square meters x 1550.003 = square feet
Square meters x 10.764 = square feet
Square meters x 1.196 = square yards
Square kilometers x 247.1 = acres
Hectares x 2.471 = acres

Cubic Measure
Cubic centimeters x 0.06102 = cubic inches
Cubic centimeters / 3.69 = fluid drachms (U.S.P.)
Cubic centimeters / 29.57 = fluid ounce (U.S.P.)
Cubic meters x 35.315 = cubic feet
Cubic meters x 1.308 = cubic yards
Cubic meters x 264.2 = gallons (231 cubic inches)

Liquid Measure
Liters x 61.022 = cubic inches (Act of Congress)
Liters x 33.84 = fluid ounces (U.S. Phar.)
Liters x .2642 = gallons (231 cubic inches)
Liters / 3.78 = gallons (231 cubic inches)
Liters / 28.316 = cubic feet
Hectoliters x 3.531 = cubic feet
Hectoliters x 2.84 = bushels (2150.42 cubic inches)
Hectoliters x .131 = cubic yards
Hectoliters / 26.42 = gallons (231 cubic inches)

Weight*
Grammes x 15.432 = grains (Act of Congress)
Grammes x 981.00 = dynes
Grammes (water) / 29.57 = fluid ounces
Grammes / 28.35 = ounces avoirdupois
Grammes x .0353 = ounces
Grammes per cubic centimeter / 27.7 = pounds per cubic inch
Joule x .7373 = foot pounds
Kilograms x 2.2046 = pounds
Kilograms x 35.3 = ounces avoirdupois
Kilograms / 907.2 = tons (2,000 pounds)
Kilograms x per square centimeter 14.223 = pounds per square inch