

Conversions with Proportions

Customary
Length - mile
foot
yard
inch

Volume - Gallon
Quart
Pint
cup

Weight/
mass Ton
Pounds (lbs)
ounce

Metric
Length - kilometer
meter
centimeter
millimeter

Volume - kiloliter
liter
milliliter

weight kilograms
mass grams
milligrams

U.S. Customary System Converted to Metric System

Length
1 inch = 2.54 centimeters
1 foot = 0.3048 meters
1 yard = 0.91 meters
1 mile = 1.61 kilometers
Weight
1 ounce = 28.35 grams
1 pound = 0.45 kilograms
1 US ton = 0.91 metric tons
Volume
1 teaspoon = 4.93 milliliters
1 tablespoon = 14.79 milliliters
1 fluid ounce = 29.57 milliliters
1 pint = 0.47 liters
1 quart = 0.95 liters
1 gallon = 3.79 liters

$$\textcircled{1} \quad 8.5 \text{ mi} = \underline{\hspace{2cm}} \text{ km}$$

$$\frac{\text{mi}}{\text{km}} \frac{1}{1.61} = \frac{8.5}{x}$$

$$x = 13.685 \text{ km}$$

$$\textcircled{2} \quad \underline{\hspace{2cm}} \text{ L} = 45 \text{ pt}$$

$$\frac{\text{L}}{\text{pt}} = \frac{.47}{1} \frac{x}{45} = 1x = .47(45)$$

$$x = 21.15 \text{ L}$$

$$\textcircled{3} \quad 20 \text{ kg} = \underline{\hspace{2cm}} \text{ lbs}$$

$$\frac{\text{kg}}{\text{lbs}} \frac{.45}{1} = \frac{20}{x} = \frac{.45x}{.45} = \frac{20}{.45}$$

$$x = 44.4 \text{ lbs}$$

$$\textcircled{4} \quad \underline{\hspace{2cm}} \text{ mL} = 700 \text{ fl. oz}$$

$$\frac{\text{mL}}{\text{oz}} = \frac{29.57}{1} = \frac{x}{700}$$

$$x = 20,699 \text{ mL}$$