American & Metric Conversions

These calculations are for converting between the American measurement system and the Metric measurement system.

**Length** – You must first change your American measurement into inches, yards, or miles; or your Metric measurement to centimeters, meters, or kilometers.

- To change from *inches* to *centimeters*, multiply by:……………… 25.4
- To change from *centimeters* to *inches*, multiply by:……………... 0.3937
- To change from *yards* to *meters*, multiply by:………………….. 0.9144
- To change from *meters* to *yards*, multiply by:………………….. 1.094
- To change from *miles* to *kilometers*, multiply by:……………….. 1.609
- To change from *kilometers* to *miles*, multiply by:………………. 0.6214

Example: Change 5 miles to kilometers - 5 \cdot 1.609 = 8.045 kilometers

**Capacity** – You must first change your American measurement into quarts, gallons, or cups; or your Metric measurement to liters.

- To change from *quarts* to *liters*, multiply by:…………………… 0.9464
- To change from *liters* to *quarts*, multiply by:…………………… 1.0567
- To change from *gallons* to *liters*, multiply by:………………….. 3.7854
- To change from *liters* to *gallons*, multiply by:…………………… .26417
- To change from *cups* to *liters*, multiply by:……………………... 0.2366
- To change from *liters* to *cups*, multiply by:……………………... 4.2268

Example: Change 8 liters to gallons – 8 \cdot .26417 = 2.11336 gallons

**Mass** – You must first change your American measurement into pounds or ounces; or your Metric measurement to kilograms or grams.

- To change from *pounds* to *kilograms*, multiply by:……………….. 0.4536
- To change from *kilograms* to *pounds*, multiply by:………………... 2.205
- To change from *ounces* to *grams*, multiply by:………………….. 28.349
- To change from *grams* to *ounces*, multiply by:………………….. 0.0353

Example: Change 25 kilograms to pounds – 25 \cdot 2.205 = 55.125 pounds