

**BAE 103
Conversion Table**

Mass and Weight

1 ounce = 437.5 grains = 28.35 grams
 1 pound = 16 ounces = 7,000 grains = 453.6 grams
 1 ton = 2,000 pounds
 1 kilogram = 1000 grams = 2.2046 pounds
 1 metric ton = 1000 kilograms

Length

1 mile = 5,280 feet = 1,760 yards = 320 rods = 80 chains
 1 chain = 66 feet = 22 yards = 4 rods = 100 links
 1 rod = 16.5 feet = 5.5 yards
 1 meter = 39.37 inches = 3.28 feet
 1 foot = 12 inches = 30.48 centimeters
 1 inch = 2.54 centimeters = 25.4 millimeters

Area

1 hectare = 10,000 square meters = 2.49 acres
 1 acre = 160 square rods = 43,560 square feet = 0.405 hectares
 1 square mile = 640 acres

Volume

1 cubic inch = 16.39 cubic centimeters
 1 cubic foot = 1,728 cubic inches = 7.48 gallons
 1 cubic yard = 27 cubic feet
 1 gallon = 4 quarts = 8 pints = 231 cubic inches = 128 fluid ounces = 3.785 liters
 1 bushel = 1.244 cubic feet
 1 cubic meter = 1000 liters
 1 liter = 1000 cubic centimeters = 1000 milliliters

Time

1 hour = 60 minutes = 3,600 seconds
 1 minute = 60 seconds

Water Volume/Mass Properties

1 gallon = 8.34 pounds
 1 cubic inch = 0.03611 pounds
 1 cubic foot = 62.4 pounds
 1 liter = 1 kilogram
 1 cubic centimeter = 1 gram
 1 cubic meter = 1,000 kilograms = 1 metric ton

Specific and Latent Heat

Specific Heat of Water – 1.0 Btu/pound/°F, 1.0 calorie/gram/°C
 Specific Heat of Ice – 0.48 Btu/pound/°F, 0.48 calorie/gram/°C
 Latent Heat of Fusion for Ice – 144 Btu/pound, 80 calories/gram
 Latent Heat of Vaporization of Water – 970 Btu/pound, 540 calories/gram

Force, Work, Power and Energy

1 calorie = 4.186 J
 1 Calorie = 1000 calories = 3.9683 Btu
 1 pound-force = 4.448 Newtons
 1 Joule = 1 Newton-meter
 1 Btu = 1054 Joules = 252 calories = 780 feet-pounds-force
 1 kilowatt = 1000 Joules/second = 1 kilojoules/second
 1 horsepower = 550 feet-pounds-force/second = 33,000 foot-pounds-force/minute
 1 horsepower = 0.746 kilowatts

