

METRIC CONVERSION TABLE

| To convert from | to | Multiply by |
|-----------------|----|-------------|
|-----------------|----|-------------|

AREA AND SECOND MOMENT OF AREA

| | | |
|--------------------------------|--------------------------------------|----------------|
| square foot (ft ²) | square meter (m ²) | 9.290 304 E-02 |
| square inch (in ²) | square meter (m ²) | 6.4516 E-04 |
| square inch (in ²) | square centimeter (cm ²) | 6.4516 E+00 |
| square yard (yd ²) | square meter (m ²) | 8.361 274 E-01 |

ENERGY (includes WORK)

| | | |
|--------------------------------|-----------|----------------|
| kilowatt hour (kW * h) | joule (J) | 3.6 E+06 |
| quad (10 ¹⁵ BtuIT) | joule (J) | 1.055 056 E+18 |
| therm (U.S.) | joule (J) | 1.054 804 E+08 |
| ton of TNT (energy equivalent) | joule (J) | 4.184 E+09 |
| watt hour (W * h) | joule (J) | 3.6 E+03 |
| watt second (W * s) | joule (J) | 1.0 E+00 |

FORCE

| | | |
|--------------------------------|-----------------|----------------|
| dyne (dyn) | newton (N) | 1.0 E-05 |
| kilogram-force (kgf) | newton (N) | 9.806 65 E+00 |
| kilopond (kilogram-force) (kp) | newton (N) | 9.806 65 E+00 |
| kip (1 kip=1000 lbf) | newton (N) | 4.448 222 E+03 |
| kip (1 kip=1000 lbf) | kilonewton (kN) | 4.448 222 E+00 |
| pound-force (lbf) | newton (N) | 4.448 222 E+00 |

FORCE DIVIDED BY LENGTH

| | | |
|-------------------------------|------------------------|----------------|
| pound-force per foot (lbf/ft) | newton per meter (N/m) | 1.459 390 E+01 |
| pound-force per inch (lbf/in) | newton per meter (N/m) | 1.751 268 E+02 |

HEAT FLOW RATE

| | | |
|---------------------------------------|----------|----------------|
| calorieth per minute (calth/min) | watt (W) | 6.973 333 E-02 |
| calorieth per second (calth/s) | watt (W) | 4.184 E+00 |
| kilocalorieth per minute (kcalth/min) | watt (W) | 6.973 333 E+01 |
| kilocalorieth per second (kcalth/s) | watt (W) | 4.184 E+03 |

To convert from

to

Multiply by

TEMPERATURE

| | | |
|------------------------|---------------------|------------------------------------|
| degree Celsius (°C) | kelvin (K) | $T/K = t/°C + 273.15$ |
| degree centigrade | degree Celsius (°C) | $t/°C \approx t/\text{deg. cent.}$ |
| degree Fahrenheit (°F) | degree Celsius (°C) | $t/°C = (t/°F - 32)/1.8$ |
| degree Fahrenheit (°F) | kelvin (K) | $T/K = (t/°F + 459.67)/1.8$ |
| kelvin (K) | degree Celsius (°C) | $t/°C = T/K - 273.15$ |

TEMPERATURE INTERVAL

| | | |
|------------------------|---------------------|----------------|
| degree Celsius (°C) | kelvin (K) | 1.0 E+00 |
| degree centigrade | degree Celsius (°C) | 1.0 E+00 |
| degree Fahrenheit (°F) | degree Celsius (°C) | 5.555 556 E-01 |
| degree Fahrenheit (°F) | kelvin (K) | 5.555 556 E-01 |
| degree Rankine (°R) | kelvin (K) | 5.555 556 E-01 |

VELOCITY (includes SPEED)

| | | |
|---------------------------|---------------------------|----------------|
| foot per second (ft/s) | meter per second (m/s) | 3.048 E-01 |
| inch per second (in/s) | meter per second (m/s) | 2.54 E-02 |
| kilometer per hour (km/h) | meter per second (m/s) | 2.777 778 E-01 |
| mile per hour (mi/h) | kilometer per hour (km/h) | 1.609 344 E+00 |
| mile per minute (mi/min) | meter per second (m/s) | 2.682 24 E+01 |

VOLUME (includes CAPACITY)

| | | |
|-------------------------------|-------------------------------|----------------|
| cubic foot (ft ³) | cubic meter (m ³) | 2.831 685 E-02 |
| cubic inch (in ³) | cubic meter (m ³) | 1.638 706 E-05 |
| cubic yard (yd ³) | cubic meter (m ³) | 7.645 549 E-01 |
| gallon (U.S.) (gal) | cubic meter (m ³) | 3.785 412 E-03 |
| gallon (U.S.) (gal) | liter (L) | 3.785 412 E+00 |
| liter (L) | cubic meter (m ³) | 1.0 E-03 |
| ounce (U.S. fluid) (fl oz) | cubic meter (m ³) | 2.957 353 E-05 |
| ounce (U.S. fluid) (fl oz) | milliliter (mL) | 2.957 353 E+01 |