### **MEASURES (ENGLISH, METRIC, AND EQUIVALENTS)**

#### UNITS OF LENGTH IN THE U.S. SYSTEM

1 foot (ft) = 12 inches (in) 1 yard (yd) = 3 feet (ft) 1 yard (yd) = 36 inches (in) 1 mile (mi) = 5,280 feet (ft)

#### UNITS OF LENGTH IN THE METRIC SYSTEM

1,000 millimeters (mm) = 1 meter 100 centimeters (cm) = 1 meter 10 decimeters (dm) = 1 meter 1 dekameter (dam) = 10 meters 1 hectometer (hm) = 100 meters 1 kilometer (km) = 1000 meters

## SYSTEM TO SYSTEM CONVERSIONS FOR LENGTH

1 inch = 2.54 centimeters 1 meter  $\approx$  3.28 feet 1 mile  $\approx$  1.61 km 1 foot  $\approx$  0.30 meters (m) 1 yard  $\approx$  0.91 meters 1 km  $\approx$  0.62 mi

#### UNITS OF WEIGHT IN THE U.S. SYSTEM

1 pound (|b) = 16 ounces (oz) 1 ton (T) = 2,000 pounds (|b)

#### UNITS OF WEIGHT IN THE METRIC SYSTEM

1 gram ≈ the weight of a paper clip 1 gram ≈ the weight of a raisin 1 gram = 1,000 milligrams (mg) 1 gram = 100 centigrams (cg) 1 kilogram (kg) = 1,000 grams 1 metric ton (t) = 1,000 kilograms

### SYSTEM TO SYSTEM CONVERSIONS FOR WEIGHT

1 ounce  $\approx$  28.3 grams 1 pound  $\approx$  0.45 kg

#### **UNITS OF AREA IN THE U.S. SYSTEM**

1 square foot (ft²) = 144 square inches (in²) 1 square yard (yd²) = 9 square feet (ft²) 1 acre = 43,560 square feet (ft²) 1 square mile (mi²) = 640 acres

#### UNITS OF AREA IN THE METRIC SYSTEM

 $1 cm^2 = 100 mm^2$   $1 dm^2 = 100 cm^2$   $1 m^2 = 100 dm^2$   $1 are (a) = 100 m^2$ 1 hectare (ha) = 100 a

#### SYSTEM TO SYSTEM CONVERSIONS FOR AREA

 $1 \text{ in}^2 \approx 6.45 \text{ cm}^2$  $1 \text{ m}^2 \approx 1.196 \text{ yd}^2$  $1 \text{ ha} \approx 2.47 \text{ acres}$ 

#### UNITS OF VOLUME IN THE U.S. SYSTEM

1 cubic foot (ft<sup>3</sup>) = 1,728 cubic inches (in<sup>3</sup>) 1 cubic yard (yd<sup>3</sup>) = 27 cubic feet (ft<sup>3</sup>) 1 cord = 128 cubic feet (ft<sup>3</sup>)

#### UNITS OF VOLUME IN THE METRIC SYSTEM

1 cc = 1 cm<sup>3</sup> 1 milliliter (mL) = 1 cm<sup>3</sup> 1 liter (L) = 1,000 millimeters (mL) 1 hectoliter (hL) = 100 liters (mL) 1 kiloliter (kL) = 1,000 liters (L)

## SYSTEM TO SYSTEM CONVERSIONS FOR VOLUME

1 in<sup>3</sup>  $\approx$  16.39 mL 1 liter  $\approx$  1.06 qt 1 gallon  $\approx$  3.79 liters 1 m<sup>3</sup>  $\approx$  35.31 ft<sup>3</sup> 1 quart  $\approx$  0.95 L

#### UNITS OF FLUID VOLUME IN THE U.S. SYSTEM

1 tablespoon = 3 teaspoons
1 fl oz = 2 tablespoons
1 cup (c) = 8 fluid ounces (fl oz)
1 pint (pt) = 2 cups (c)
1 quart (qt) = 2 pints (pt)
1 gallon (gal) = 4 quarts (qt)
1 gallon (gal) = 128 fluid ounces (fl oz)

### UNITS OF TIME IN BOTH SYSTEMS

1 millisecond = 1,000 microseconds 1 second =1,000 milliseconds 1 minute = 60 seconds 1 hour = 60 minutes 1 day  $\approx$  24 hours 1 month  $\approx$  30 days 1 year  $\approx$  365 days 1 banking year = 360 days

# SYSTEM TO SYSTEM CONVERSIONS FOR TEMPERATURE

$$^{\circ}F \rightarrow ^{\circ}C \quad C = \frac{5}{9}(F - 32)$$

$$^{\circ}$$
C  $\rightarrow$   $^{\circ}$ F  $F = \frac{9}{5}C + 32$ 

#### METRIC PREFIXES

giga - (G-)	mega- (M-)	ki o- (k-)	hector- (h-)	deka- (da-, D-)	gram (g) meter (m) liter (L)	deci- (d-)	cent- (c-)	milli- (m-)	micro- (μ-)	na no- (n-)
10 <sup>9</sup>	10 <sup>6</sup>	10 <sup>3</sup>	10 <sup>2</sup>	10 <sup>1</sup>	1	10 <sup>-1</sup>	10 <sup>-2</sup>	10 <sup>-3</sup>	10 <sup>-6</sup>	10 <sup>-9</sup>