MEASUREMENT AND CONVERSION TABLE

U. S. CUSTOMARY SYSTEM

1 yd = 3 ft
1 ft = 12 in
1 fathom = 6 ft
1 mi = 5, 280 ft
1 acre = 43,560 ft^2
1 lb = 16 oz (dry weight)
1 T = 2000 lb

3 tsp = 1 Tbs
16 Tbs $\approx$ 1 cup
1 cup = 8 oz (liquid capacity)
1 pt = 2 cups
1 qt = 2 pt
1 gal = 4 qt
1 gal $\approx$ 231 in^3
1 ft^3 $\approx$ 7.48 gal

METRIC SYSTEM

1 m = 1,000,000 microns (μ)
1 m = 1000 mm
1 m = 100 cm
1 m = 10 dm
1 km = 1000 m
1 cm = 10 mm

1 hectare (ha) = 10,000 m^2
1 kg = 1000 g
1 g = 1000 mg
1 kL = 1000 L
1 L = 1000 mL
1 cm^3 = 1 mL
1 m^3 = 1000 L

CONVERSION BETWEEN THE U. S. CUSTOMARY AND THE METRIC SYSTEM

1 in. = 2.54 cm
1 m $\approx$ 39.37 in.
1 mi $\approx$ 1.609 km
1 kwh = 3,413 Btu
1 lb. = 4.448 N (Newtons)

1 lb $\approx$ 453.6 g
1 oz $\approx$ 28.35 g
1 kg $\approx$ 2.205 lb
1 pt $\approx$ 473.2 cm^3
1 L $\approx$ 1.057 qt
1 tsp = 5 mL
1 ft^3 $\approx$ 28.32 L

MTH 095 Intermediate Algebra
Useful Formulas

Common Equations

$y = mx + b$

$y = ab^x$

$y = ax^2 + bx + c$

Common Functions

$f(x) = mx + b$

$f(x) = ab^x$

$f(x) = ax^2 + bx + c$

Properties of Exponents **if** $b \neq 0$ **and** $c \neq 0$

$b^m b^n = b^{m+n}$

$(b^m)^n = b^{mn}$

$(bc)^n = b^n c^n$

$\left(\frac{b}{c}\right)^n = \frac{b^n}{c^n}$

$\frac{b^m}{b^n} = b^{m-n}$

$b^{-n} = \frac{1}{b^n}$

$b^0 = 1$

Properties of Logarithms

$\log_b(a) = c \quad and \quad b^c = a$

$\log_b\left(x^p\right) = p\log_b(x)$

$a = c \quad and \quad \log_b(a) = \log_b(c)$

$\ln(x) = \log_e(x)$

$\ln(x) = y \quad and \quad e^y = x$

Quadratic Formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Vertex

$$\left(-\frac{b}{2a},\ f\left(-\frac{b}{2a}\right)\right)$$

Square Root Method

$x^2 = k$

$x = \pm\sqrt{k}$

Sequence Formulas

$a_n = a_1 + (n-1)d$

$a_n = a_1 r^{n-1}$