TMTH 010
FORMULA SHEET

Whole Numbers $\qquad$ Mean $= \dfrac{\text{Sum of Values}}{\text{Number of Values}}$

Fractions $\qquad$ Fraction $= \dfrac{\text{Part}}{\text{Base}}$

Decimals $\qquad$ Rate $= \dfrac{\text{Part}}{\text{Base}}$

Percent $\qquad$ Interest $=$ Principal $\times$ Rate $\times$ Time

The Metric System

Value	10^3	10^2	10^1	Base units	10^{-1}	10^{-2}	10^{-3}
Name	*kilo*	*hecto*	*deka*	*meter, gram, litre*	*deci*	*centi*	*milli*
Symbol	k	h	da	m, g, l	d	c	m

Conversion Factors
Length
1 centimeter (cm) = 0.3937 inch (in)
1 foot (ft) = 12 inch (in) = 0.3048 meter (m)
1 inch (in) = 2.54 centimeters (cm)
1 kilometer (km) = 0.6214 statute mile (mi)
1 statute mile (mi) = 5280 feet (ft) = 1.609 kilometers (km)
1 yard (yd) = 3 feet (ft) = 0.9144 meter (m)
1 meter (m) = 39.37 inches (in) = 3.281 feet (ft)

Area
1 square foot (ft^2) = 144 square inches (in^2) = 0.09290 square meters (m^2)
1 square meter (m^2) = 10.76 square feet (ft^2) = 1550 square inches (in^2)
1 square inch (in^2) = 6.452 square centimeters (cm^2)
1 acre = 43560 square feet (ft^2) = 4047 square meters (m^2)
1 square centimeter (cm^2) = 0.1550 square inches (in^2)
1 square mile (mi^2) = 27 878 400 square feet (ft^2) = 640 acre

Volume
1 cubic yard (yd^3) = 27 cubic feet (ft^3) = 0.7646 cubic meter (m^3)
1 cubic meter (m^3) = 35.3 cubic feet (ft^3)
1 cubic inch (in^3) = 16.39 cubic centimeters (cm^3)
1 cubic foot (ft^3) = 1728 cubic inches (in^3) = 28320 cubic centimeters (cm^3)

Mass
1 pound = 16 ounces = 454 grams
1 ton = 2000 pounds
1 metric tonne = 1000 kg = 2200 pounds
1 kg = 2.2 pounds

Temperature

$$°F = \frac{9}{5}°C + 32$$

$$°C = \frac{5}{9}(°F - 32)$$

$$K = °C + 273$$

$$°C = K - 273$$

Exponent and Radicals

$$Power = base^{exponent}$$

$$\sqrt[n]{a} = a^{\frac{1}{n}} \qquad a^{\frac{m}{n}} = \sqrt[n]{a^m} = \left(\sqrt[n]{a}\right)^m$$

Graphing and Angles

$$Slope = \frac{rise}{run} = \frac{\Delta y}{\Delta x} = \frac{y2 - y1}{x2 - x1}$$

1° = 60' (1 degree = 60 minutes)
1' = 60" (1 minute = 60 seconds)