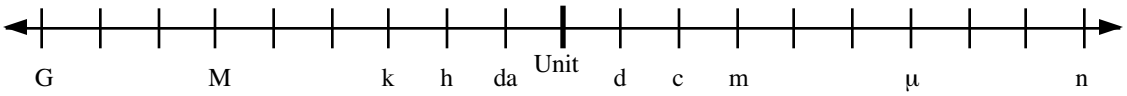
Mathematics 20-2 Formula Sheet

Measurement

Imperial to Imperial	Imperial to SI (Metric)	SI (Metric) to Imperial
1 ft = 12 in	1 in = 2.54 cm	1 cm = 0.3937 in
1 yd = 3 ft	1 ft = 0.3048 m	1 m = 3.2808 ft
1 mi = 5280 ft	1 yd = 0.9144 m	1 m = 1.0936 yds
1 mi = 1760 yds	1 mi = 1.6093 km	1 km = 0.6214 mi



$SA_{Cylinder} = 2\pi r^2 + 2\pi rh$ $\quad SA_{Cone} = \pi r^2 + \pi rs$ $\quad SA_{Sphere} = 4\pi r^2$

$V_{Cylinder} = \pi r^2 h$ $\quad V_{Cone} = \frac{1}{3}\pi r^2 h$ $\quad V_{Sphere} = \frac{4}{3}\pi r^3$

$V_{Pyramid} = \frac{1}{3}(A_{Base} \times h)$ $\quad V_{Prism} = A_{Base} \times h$

Polygons Sum of the interior angles of an n-sided polygon is $(n - 2)180°$

Linear Relations $m = \frac{y_2 - y_1}{x_2 - x_1}$ $\quad d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

$y = mx + b$ $\quad y - y_1 = m(x - x_1)$ $\quad Ax + By + C = 0$

Quadratic Functions and Equations

$y = ax^2 + bx + c$ $\quad y = a(x - p)^2 + q$ $\quad y = a(x - m)(x - n)$

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

Trigonometry

$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$ $\quad a^2 = b^2 + c^2 - 2bc\cos A$ $\quad \cos A = \frac{b^2 + c^2 - a^2}{2bc}$

Pythagorean Theorem $a^2 = b^2 + c^2$

Statistics $z = \frac{x - \mu}{\sigma}$

Graphing Calculator x: $[x_{min}, x_{max}, x_{scl}]$
y: $[y_{min}, y_{max}, y_{scl}]$