

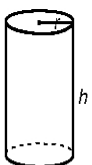
# Elementary Algebra Applied Math I Reference Sheet

**Circle**



Area =  $\pi r^2$   
Circumference =  $2\pi r$   
Circumference =  $\pi d$

**Cylinder**



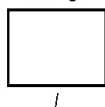
Volume =  $\pi r^2 h$   
Surface Area =  $2\pi r^2 + 2\pi r h$

**Sphere**



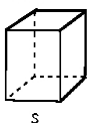
Volume =  $\frac{4}{3}\pi r^3$   
Surface Area =  $4\pi r^2$

**Rectangle**



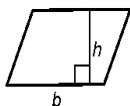
Area =  $lw$   
Perimeter =  $2l + 2w$

**Cube**



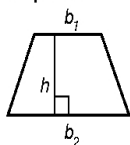
Volume =  $s^3$   
Surface Area =  $6s^2$

**Parallelogram**



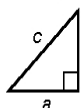
Area =  $bh$

**Trapezoid**



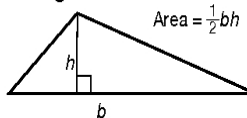
Area =  $\frac{1}{2}h(b_1 + b_2)$

**Pythagorean Theorem**



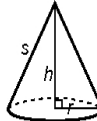
$a^2 + b^2 = c^2$

**Triangle**



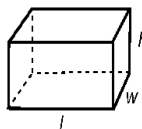
Area =  $\frac{1}{2}bh$

**Cone**



Volume =  $\frac{1}{3}\pi r^2 h$   
Surface Area =  $\pi r^2 + \pi r s$

**Rectangular Prism**



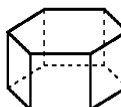
Volume =  $lwh$   
Surface Area =  $2wl + 2lh + 2wh$

**Right Pyramid**



Volume =  $\frac{1}{3} \times \text{base area} \times h$   
Surface Area =  $\text{base area} + \text{face areas}$

**Right Prism**



Volume =  $\text{base area} \times h$   
Surface Area =  $\text{base areas} + \text{face areas}$

## Formulas

**DISTANCE BETWEEN TWO POINTS:**  $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

**MID-POINT BETWEEN TWO POINTS:**  $\left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$

**SLOPE:**  $m = \frac{y_2 - y_1}{x_2 - x_1}$

**SLOPE-INTERCEPT FORM:**  $y = mx + b$

**POINT-SLOPE FORM:**  $y - y_1 = m(x - x_1)$