Geometry

Triangle	$A = \frac{1}{2}bh$
Rectangle	$A = lw$ $P = 2l + 2w$
Trapezoid	$A = \frac{1}{2}h(b_1 + b_2)$
Parallelogram	$A = bh$
Rectangular Prism	$V = lwh$ $SA = 2lw + 2hw + 2lh$
Circle	$A = \pi r^2$ $C = 2\pi r$
Cylinder	$V = \pi r^2 h$
Sphere	$V = \frac{4}{3}\pi r^3$

Trigonometry

$$\sin\theta = \frac{\text{opposite leg}}{\text{hypotenuse}}$$

$$\csc\theta = \frac{\text{hypotenuse}}{\text{opposite leg}}$$

$$\cos\theta = \frac{\text{adjacent leg}}{\text{hypotenuse}}$$

$$\sec\theta = \frac{\text{hypotenuse}}{\text{adjacent leg}}$$

$$\tan\theta = \frac{\text{opposite leg}}{\text{adjacent leg}}$$

$$\cot\theta = \frac{\text{adjacent leg}}{\text{opposite leg}}$$

Arc Length: $s = r\theta$

Area of Sector: $A = \frac{1}{2}\theta r^2$

Law of Sines

$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

Law of Cosines

$$a^2 = b^2 + c^2 - 2bc\cos A$$

Equation of a Line

Slope-Intercept Form:

$y = mx + b$

Point-Slope Form:

$y - y_1 = m(x - x_1)$

Distance

$d = rt$

Midpoint Formula

$$\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$$

Slope of a Line

$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

Quadratic Formula

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

Pythagorean Theorem

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

Distance Formula

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

Sum of Measures of Interior Angles of a Polygon

$(n - 2)180$

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