

EXAMPLE FORMULA SHEET

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

$$x = -\frac{b}{2a}$$

$$T_n = a + (n - 1)d$$

$$T_n = ar^{n-1}$$

$$S_n = \frac{n}{2}[2a + (n - 1)d]$$

$$S_n = \frac{a(r^n - 1)}{r - 1}; r \neq 1 \quad S_\infty = \frac{a}{1 - r}; -1 < r < 1$$

$$f'(x) = \lim_{h \rightarrow 0} \frac{f(x + h) - f(x)}{h}$$

$$F = x \left[\frac{(1 + i)^n - 1}{i} \right]$$

$$P = x \left[\frac{1 - (1 + i)^{-n}}{i} \right]$$

$$A = P(1 + ni)$$

$$A = P(1 - ni)$$

$$A = P(1 + i)^n$$

$$A = P(1 - i)^n$$

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

$$y = mx + c$$

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

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

$$y^2 + x^2 = r^2$$

$$(y - p)^2 + (x - q)^2 = r^2$$

$$V_{\text{sphere}} = \frac{4}{3}\pi r^3$$

$$V_{\text{cone}} = \frac{1}{3}h\pi r^2$$

$$\sin(A + B) = \sin A \cdot \cos B + \cos A \cdot \sin B$$

$$\sin(A - B) = \sin A \cdot \cos B - \cos A \cdot \sin B$$

$$\cos(A + B) = \cos A \cdot \cos B - \sin A \cdot \sin B$$

$$\cos(A - B) = \cos A \cdot \cos B + \sin A \cdot \sin B$$

$$\cos 2A = \cos^2 A - \sin^2 A = 1 - 2\sin^2 A = 2\cos^2 A - 1$$

$$\sin 2A = 2\sin A \cdot \cos A$$

$$\cos^2 A + \sin^2 A = 1$$

$$\bar{x} = \frac{1}{n} \sum_{i=1}^n x_i$$

In ΔABC :

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

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

$$\text{area} = \frac{1}{2} ab \cdot \sin C$$