

# MCR 3U Exam Formulae

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

$$\sin \theta = \frac{y}{r}$$

$$\cos \theta = \frac{x}{r}$$

$$\tan \theta = \frac{y}{x}$$

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

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

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

$$S_n = \frac{n(t_1 + t_n)}{2} \quad \text{or} \quad S_n = \frac{n}{2}[2a + (n-1)d]$$

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

$$S_n = \frac{a(1-r^n)}{1-r} \quad \text{or} \quad S_n = \frac{a(r^n-1)}{r-1}$$