

General Trigonometric Relationships ⁴

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

$$\sin \frac{\theta}{2} = \sqrt{\frac{1}{2}(1 - \cos \theta)}$$

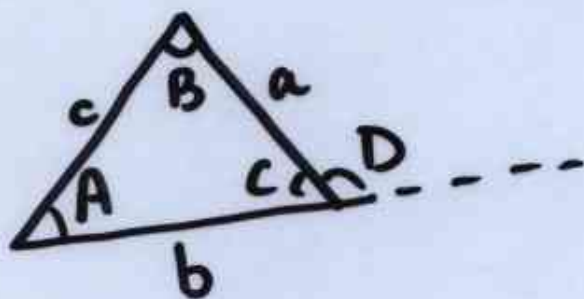
$$\cos \frac{\theta}{2} = \sqrt{\frac{1}{2}(1 + \cos \theta)}$$

$$\sin 2\theta = 2 \sin \theta \cos \theta$$

$$\cos 2\theta = \cos^2 \theta - \sin^2 \theta$$

$$\sin(a \pm b) = \sin a \cos b \pm \cos a \sin b$$

$$\cos(a \pm b) = \cos a \cos b \mp \sin a \sin b$$



$$\frac{a}{b} = \frac{\sin A}{\sin B} \quad \dots \text{Sine Law}$$

$$c^2 = a^2 + b^2 - 2ab \cos C \quad \text{Cosine Law} \quad \backslash$$

$$c^2 = a^2 + b^2 + 2ab \cos D \quad \text{Cosine Law} \quad /$$