

## RPP 3

### Addition

$$\cos(a + b) = \cos a \cos b - \sin a \sin b$$

$$\cos(a - b) = \cos a \cos b + \sin a \sin b$$

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

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

$$\tan(a + b) = \frac{\tan a + \tan b}{1 - \tan a \tan b}$$

$$\tan(a - b) = \frac{\tan a - \tan b}{1 + \tan a \tan b}$$

### Duplication

$$\cos(2x) = \cos^2 x - \sin^2 x$$

$$= 2\cos^2 x - 1 \tag{1}$$

$$= 1 - 2\sin^2 x$$

$$\sin(2x) = 2\sin x \cos x$$

$$\tan(2x) = \frac{2\tan x}{1 - \tan^2 x}$$