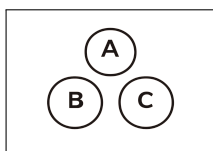


37 Formulas and Identities

Sum to Product

A

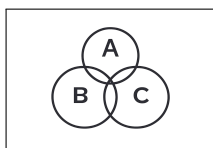


$$\alpha = 75^\circ$$

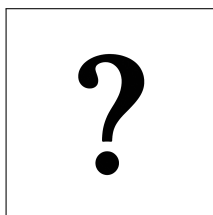
$$\beta = 15^\circ$$

$$\sin(\alpha) + \sin(\beta) = 2(\sqrt{2}/2)(\sqrt{3}/2)$$

$$\sin(\alpha) + \sin(\beta) = \sqrt{6}/2$$



$$\sin(\alpha) + \sin(\beta) = 2 \sin((\alpha + \beta)/2) \times \cos((\alpha - \beta)/2)$$



$$\alpha = 105^\circ$$

$$\beta = 15^\circ$$

$$\sin(\alpha) + \sin(\beta) = ?$$

37 Formulas and Identities Sum to Product

A



$$\alpha = 105^\circ$$

$$\beta = 15^\circ$$

$$\sin(\alpha) + \sin(\beta) = 2 \sin((\alpha + \beta)/2) \times \cos((\alpha - \beta)/2)$$

$$\sin(105^\circ) + \sin(15^\circ) = 2 \sin(60^\circ) \cos(45^\circ)$$

$$\sin(105^\circ) + \sin(15^\circ) = 2(\sqrt{3}/2) \times (\sqrt{2}/2)$$

$$\sin(105^\circ) + \sin(15^\circ) = \sqrt{6}/2$$