

2.65  
65

$$g^2 3x + g^2 4x + g^2 5x = 0.5 \left( \frac{\sin 80 + \sin 40}{\sin 70} \right)^2$$

$$g^2 3x + g^2 4x + g^2 5x = 0.5 \left( \frac{2 \sin 60 \cos 20}{\sin 70} \right)^2$$

$$g^2 3x + g^2 4x + g^2 5x = 0.5 \cdot 4 \sin^2 60 = 2 \left( \frac{\sqrt{3}}{2} \right)^2 = \frac{3}{2} \quad | \cdot 2$$

$$2g^2 3x + 2g^2 4x + 2g^2 5x = 3 \quad | - 3$$

$$(2g^2 3x - 1) + (2g^2 4x - 1) + (2g^2 5x - 1) = 0$$

$$g^2 6x + g^2 8x + g^2 10x = 0$$

$$2g^2 8x + 2g^2 8x = 0$$

$$g^2 8x (2g^2 x + 1) = 0$$

$$g^2 8x = 0 \rightarrow x = \frac{\pi}{2} + \pi k$$

$$x = \frac{\pi}{2} + \pi k$$

$$2g^2 x + 1 = 0 \rightarrow g^2 2x = -\frac{1}{2}$$

$$2x = \pm \frac{2\pi}{3} + 2\pi k$$

$$x = \pm \frac{\pi}{3} + \pi k$$