

$$\frac{3.69}{75} \quad \frac{2 \sin\left(15 + \frac{x}{2}\right) \cos\left(15 - \frac{x}{2}\right)}{\cos^2\left(45 - \frac{x}{2}\right)} + \frac{\sin x}{1 + \sin x} = 2$$

$$\frac{\sin 30 + \sin x}{\left(\frac{\sqrt{2}}{2} \cos \frac{x}{2} + \frac{\sqrt{2}}{2} \sin \frac{x}{2}\right)^2} + \frac{\sin x}{1 + \sin x} = 2$$

$$2 = \frac{\sin x}{1 + \sin x} + \frac{\frac{1}{2} + \sin x}{\frac{1}{2} \left(\cos \frac{x}{2} + \sin \frac{x}{2}\right)^2} = \frac{\sin x}{1 + \sin x} + \frac{\frac{1}{2} + \sin x}{\frac{1}{2} (1 + 2 \sin \frac{x}{2} \cos \frac{x}{2})} = \frac{\sin x}{1 + \sin x} + \frac{\frac{1}{2} + \sin x}{\frac{1}{2} + \sin x}$$

$$2 = \frac{\sin x}{1 + \sin x} + \frac{\frac{2 \sin x}{2}}{\frac{1 + \sin x}{2}} = \frac{\sin x}{1 + \sin x} + \frac{1 + 2 \sin x}{1 + \sin x} = \frac{1 + 3 \sin x}{1 + \sin x}$$

$$2 + 2 \sin x = 1 + 3 \sin x$$

$$1 = \sin x$$

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

$\sin x \neq -1$     הן צדדים ארוכים  
 $x \neq \frac{3\pi}{2} + 2\pi k$