



$$\Rightarrow 2 \cos 2x \cdot \sin 3x + \sin 3x = 2 \cos 2x \cdot \sin 5x$$

$$\Rightarrow \sin 5x + \sin x + \cancel{\sin 3x} = \sin 7x + \cancel{\sin 3x}$$

$$\Rightarrow \sin 7x - \sin 5x = \sin x$$

$$\Rightarrow 2 \cos 6x \sin x = \sin x$$

$$\Rightarrow \cos 6x = \frac{1}{2}$$

$$\Rightarrow 6x = 60^\circ$$

$$\Rightarrow \boxed{x = 10^\circ} \quad \underline{\underline{\text{Ans.}}}$$