

$$(h) \lim_{x \rightarrow 0} \frac{\sin 3x}{\sin 5x}$$

$$\lim_{x \rightarrow 0} \frac{\sin 3x}{\sin 5x} = \lim_{x \rightarrow 0} \frac{\sin 3x}{3x} \cdot \frac{1}{\frac{\sin 5x}{5x}} \cdot \frac{3}{5}$$

$$= \frac{3}{5} \lim_{x \rightarrow 0} \frac{\sin 3x}{3x} \cdot \lim_{x \rightarrow 0} \frac{1}{\frac{\sin 5x}{5x}} = \frac{3}{5} \cdot 1 \cdot 1 = \frac{3}{5}$$