

Question 4

Evaluate the limit:

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

Question 4 - Solution

We are asked to evaluate:

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

Step 1: Use standard limit identity

Recall the standard identity:

$$\lim_{x \rightarrow 0} \frac{\sin(kx)}{x} = k$$

This applies directly here with $k = 3$.

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

Answer: 3