Exercise 39

Find the limit.

$$\lim_{x \to 0} \frac{\sin 5x}{3x}$$

Solution

Rewrite the limit in terms of one that is known.

$$\lim_{x \to 0} \frac{\sin 5x}{3x} = \frac{5}{3} \lim_{x \to 0} \frac{\sin 5x}{5x} = \frac{5}{3} \lim_{\theta \to 0} \frac{\sin \theta}{\theta} = \frac{5}{3}(1) = \frac{5}{3}$$