

Section 4.4: Additional Problems

Compute these limits.

$$1. \lim_{x \rightarrow 0} \frac{\sin(x) + e^x - 1}{x} =$$

$$2. \lim_{x \rightarrow 0^+} (1 + 5x)^{\frac{1}{2x}} =$$

$$3. \lim_{x \rightarrow \infty} \frac{\ln(2 + e^{3x})}{\pi x}$$

$$4. \lim_{x \rightarrow \infty} \left(\frac{x^2}{x-1} - \frac{x^2}{x+5} \right) =$$

$$5. \lim_{x \rightarrow 2^+} \frac{\ln(x-1)}{(x-2)^2} =$$