

L'Hospital's Rule

Find the limit:

1. $\lim_{x \rightarrow 0} \frac{e^{3x} - 1}{x}$

2. $\lim_{n \rightarrow \infty} \frac{\ln x}{x}$

3. $\lim_{h \rightarrow 1} \frac{\sqrt{8+x} - 3x^{\frac{1}{4}}}{x^2 + 3x - 4}$