

L'Hospital's Rule (4.4)**L'Hospital's Rule:** Find the limit using L'Hospital's Rule.

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

2.
$$\lim_{\theta \rightarrow \pi/2} \frac{1-\sin \theta}{\csc \theta}$$

3.
$$\lim_{x \rightarrow 1} \frac{\ln x}{\sin \pi x}$$

4.
$$\lim_{x \rightarrow \infty} \frac{\sqrt{x^2+2}}{\sqrt{2x^2+1}}$$