

Indeterminate forms and L'Hopital's Rule

L'Hopital's Rule

Cauchy's Mean Value Theorem –

2 points $(g(x), f(x))$ $(g(a), f(a))$

$$\lim_{x \rightarrow 0} \frac{\sin 5x}{x}$$

$$\lim_{x \rightarrow 1^+} \left(\frac{1}{x-1} - \frac{1}{\ln x} \right) =$$

$$\text{If } \lim_{x \rightarrow a} \ln(f(x)) = L,$$

$$\text{Ex } \lim_{x \rightarrow \infty} (1+2x)^{\frac{1}{2 \ln x}}$$