

# Indeterminate Form and L'Hopital Rule

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2 L'Hopital Rule

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**Example:**  $\lim_{x \rightarrow \infty} \left(1 + \frac{1}{x}\right)^x = e.$



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**Note:** This rule also works if  $c = \pm\infty$  or when  $x \rightarrow c^+$  or  $x \rightarrow c^-$ .

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$$11 \quad \lim_{x \rightarrow \infty} \left(\frac{x^2}{x-1} - \frac{x^2}{x+1}\right).$$