

The Secret of Calculus Section 4 4 L'Hospital Rule

Lesson 283 | Calculus AB | L'Hopital's rule

<https://www.youtube.com/watch?v=wLH2aTTdCtQ>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

Evaluate $\lim_{x \rightarrow 0}$ of $(e^{(7x)} - 1)/(8x)$ using L'Hospital's rule. Check its indeterminate form.

02

Evaluate $\lim_{x \rightarrow 0}$ of $(e^{(13x)} - 1)/(7x)$ using L'Hospital's rule. Check its indeterminate form.

03

Evaluate $\lim_{x \rightarrow 0}$ of $(e^{(14x)} - 1)/(13x)$ using L'Hospital's rule. Check its indeterminate form.

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Name: _____ Date: _____ Show your reasoning.

04

Evaluate $\lim_{x \rightarrow 0}$ of $(e^{(2x)} - 1)/(7x)$ using L'Hospital's rule. Check its indeterminate form.

05

Evaluate $\lim_{x \rightarrow 0}$ of $(e^{(8x)} - 1)/(10x)$ using L'Hospital's rule. Check its indeterminate form.

06

Evaluate $\lim_{x \rightarrow 0}$ of $(e^{(13x)} - 1)/(3x)$ using L'Hospital's rule. Check its indeterminate form.

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01

Evaluate $\lim_{x \rightarrow 0}$ of $(e^{(7x)} - 1)/(8x)$ using L'Hospital's rule. Check its indeterminate form.

Numerator and denominator both tend to 0. Differentiate separately: $7e^{(7x)}/8$. Its limit is $7/8$.

02

Evaluate $\lim_{x \rightarrow 0}$ of $(e^{(13x)} - 1)/(7x)$ using L'Hospital's rule. Check its indeterminate form.

Numerator and denominator both tend to 0. Differentiate separately: $13e^{(13x)}/7$. Its limit is $13/7$.

03

Evaluate $\lim_{x \rightarrow 0}$ of $(e^{(14x)} - 1)/(13x)$ using L'Hospital's rule. Check its indeterminate form.

Numerator and denominator both tend to 0. Differentiate separately: $14e^{(14x)}/13$. Its limit is $14/13$.

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04

Evaluate $\lim_{x \rightarrow 0}$ of $(e^{(2x)} - 1)/(7x)$ using L'Hospital's rule. Check its indeterminate form.

Numerator and denominator both tend to 0. Differentiate separately: $2e^{(2x)}/7$. Its limit is $2/7$.

05

Evaluate $\lim_{x \rightarrow 0}$ of $(e^{(8x)} - 1)/(10x)$ using L'Hospital's rule. Check its indeterminate form.

Numerator and denominator both tend to 0. Differentiate separately: $8e^{(8x)}/10$. Its limit is $4/5$.

06

Evaluate $\lim_{x \rightarrow 0}$ of $(e^{(13x)} - 1)/(3x)$ using L'Hospital's rule. Check its indeterminate form.

Numerator and denominator both tend to 0. Differentiate separately: $13e^{(13x)}/3$. Its limit is $13/3$.