

Calculus 2 6 Limit at Infinity Part I

Lesson 267 | Calculus AB | Limits at infinity

<https://www.youtube.com/watch?v=zZOMfrWQh84>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

Find $\lim_{x \rightarrow \infty}$ of $(12x^2 + 8x + 1)/(3x^2 + 6)$. Identify the horizontal asymptote.

02

Find $\lim_{x \rightarrow \infty}$ of $(4x^2 + 8x + 1)/(3x^2 + 6)$. Identify the horizontal asymptote.

03

Find $\lim_{x \rightarrow \infty}$ of $(2x^2 + 11x + 1)/(3x^2 + 6)$. Identify the horizontal asymptote.

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04

Find $\lim_{x \rightarrow \infty}$ of $(9x^2 + 4x + 1)/(10x^2 + 7)$. Identify the horizontal asymptote.

05

Find $\lim_{x \rightarrow \infty}$ of $(13x^2 + 7x + 1)/(14x^2 + 5)$. Identify the horizontal asymptote.

06

Find $\lim_{x \rightarrow \infty}$ of $(9x^2 + 3x + 1)/(5x^2 + 7)$. Identify the horizontal asymptote.

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01

Find $\lim_{x \rightarrow \infty}$ of $(12x^2 + 8x + 1)/(3x^2 + 6)$. Identify the horizontal asymptote.

Divide numerator and denominator by x^2 . Lower-degree terms approach zero, leaving $12/3=4$. Horizontal asymptote $y=4$.

02

Find $\lim_{x \rightarrow \infty}$ of $(4x^2 + 8x + 1)/(3x^2 + 6)$. Identify the horizontal asymptote.

Divide numerator and denominator by x^2 . Lower-degree terms approach zero, leaving $4/3=4/3$. Horizontal asymptote $y=4/3$.

03

Find $\lim_{x \rightarrow \infty}$ of $(2x^2 + 11x + 1)/(3x^2 + 6)$. Identify the horizontal asymptote.

Divide numerator and denominator by x^2 . Lower-degree terms approach zero, leaving $2/3=2/3$. Horizontal asymptote $y=2/3$.

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04

Find $\lim_{x \rightarrow \infty}$ of $(9x^2 + 4x + 1)/(10x^2 + 7)$. Identify the horizontal asymptote.

Divide numerator and denominator by x^2 . Lower-degree terms approach zero, leaving $9/10 = 9/10$. Horizontal asymptote $y = 9/10$.

05

Find $\lim_{x \rightarrow \infty}$ of $(13x^2 + 7x + 1)/(14x^2 + 5)$. Identify the horizontal asymptote.

Divide numerator and denominator by x^2 . Lower-degree terms approach zero, leaving $13/14 = 13/14$. Horizontal asymptote $y = 13/14$.

06

Find $\lim_{x \rightarrow \infty}$ of $(9x^2 + 3x + 1)/(5x^2 + 7)$. Identify the horizontal asymptote.

Divide numerator and denominator by x^2 . Lower-degree terms approach zero, leaving $9/5 = 9/5$. Horizontal asymptote $y = 9/5$.