





<https://vizle.offnote.co>

Contact us: vizle@offnote.co

This document was generated automatically by **Vizle**

Your **Personal Video Reader Assistant**

Learn from Videos **Faster** and **Smarter**

VIZLE **PRO / BIZ**

PDF, PPT ~~Watermarks~~

- Convert *entire* videos
- *Customize* to retain all essential content
- Include Spoken *Transcripts*
- Customer support

Visit <https://vizle.offnote.co/pricing> to learn more

VIZLE **FREE PLAN**

PDF only ~~Watermarks~~

- Convert videos *partially*
- Slides may be *skipped**
- Usage restrictions
- No Customer support

Visit <https://vizle.offnote.co> to try free

Login to Vizle to unlock more slides*

Similarly $\lim_{x \rightarrow \infty} f(x) = L$ Then given $\epsilon > 0$ There

exists $B > 0$ s.t.

$|f(x) - L| < \epsilon$ whenever $|x| > B$.

Ex:

$$\lim_{x \rightarrow -\infty} \frac{\sqrt{2x^2 + x - 10}}{3x - 1} = \lim_{x \rightarrow -\infty} \frac{\sqrt{x^2 \left(2 + \frac{x}{x^2} - \frac{10}{x^2}\right)}}{x \left(3 - \frac{1}{x}\right)}$$

$$= \lim_{x \rightarrow -\infty} \frac{\sqrt{x^2} \cdot \sqrt{2 + \frac{1}{x} - \frac{10}{x^2}}}{x \left(3 - \frac{1}{x}\right)}$$

Def: $\lim_{x \rightarrow a} f(x) = +\infty$

Given any $A > 0$ (Large) there exists $\delta > 0$ s.t.
 $f(x) > A$ whenever $0 < |x - a| < \delta$

Similarly: $\lim_{x \rightarrow a} f(x) = -\infty$

$$\lim_{x \rightarrow +\infty} \frac{(\sqrt{x^2+2x} - x) (\sqrt{x^2+2x} + x)}{(\sqrt{x^2+2x} + x)}$$

$$(a-b)(a+b) = a^2 - b^2$$

$$= \lim_{x \rightarrow +\infty} \frac{\cancel{x} + 2x - \cancel{x}}{\sqrt{x^2+2x} + x} = \lim_{x \rightarrow +\infty} 2 \frac{x}{\sqrt{x^2+2x} + x}$$



<https://vizle.offnote.co>

Contact us: vizle@offnote.co

This document was generated automatically by **Vizle**

Your **Personal Video Reader Assistant**

Learn from Videos **Faster** and **Smarter**

VIZLE **PRO / BIZ**

PDF, PPT ~~Watermarks~~

- Convert *entire* videos
- *Customize* to retain all essential content
- Include Spoken *Transcripts*
- Customer support

Visit <https://vizle.offnote.co/pricing> to learn more

VIZLE **FREE PLAN**

PDF only ~~Watermarks~~

- Convert videos *partially*
- Slides may be *skipped**
- Usage restrictions
- No Customer support

Visit <https://vizle.offnote.co> to try free

Login to Vizle to unlock more slides*