

# Notes for "Calculus"

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AI503: Calculus

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# Contents

<b>1</b>	<b>Introduktion</b>	<b>3</b>
<b>2</b>	<b>Notes</b>	<b>4</b>
2.1	Definitions . . . . .	4

# **1    Introdution**

Notes and exercises for lectures and TA-sessions. Note that mistakes in note and/or exercises may occur.

## 2 Notes

### 2.1 Definitions

$$\lim_{x \rightarrow c} f(x) = L$$

$L$  is the limit of  $f(x)$  as  $x$  approaches  $c$ , if for every  $\varepsilon > 0$  there exists a  $\delta > 0$  such that if  $0 < |x - c| < \delta$  then  $|f(x) - L| < \varepsilon$ .

if  $f$  is continuous at  $c$  then  $\lim_{x \rightarrow c} f(x) = f(c)$