

Extra Credit

March 26, 2022

## Chapter 3

### Def 3.1.1

Let  $f$  be a fn. w/ domain  $D \subseteq \mathbb{R}$ . Then  $f$  has a limit as  $x$  approaches infinity iff  $\exists L \in \mathbb{R}$  s.t. for every  $\mathcal{E} > 0, \exists M \in \mathbb{R}^+$  s.t.  $|f(x) - L| < \mathcal{E}$ , if  $x \geq M$  and  $x \in D$ . If such an  $L$  exists, then  $L$  is called the limit of the fn  $f$  as  $x$  tends to infinity and we write  $\lim_{x \rightarrow \infty} f(x) = L$

Def 3.1.2

Thm 3.1.6

Thm 3.1.7

Thm 3.1.8

Def 3.1.9

Def 3.1.10

Def 3.2.1

Thm 3.2.5

Thm 3.2.6

Def 3.2.12

Thm 3.2.14

Def 3.3.1

Def 3.3.2

Def 3.3.4

Thm 3.3.7

## Chapter 4

Def 4.1.1

Def 4.1.2

Sequential Criterion for Continuity Thm

Def 4.1.6

Thm 4.1.7