# Notes for Mathematical Anaysis

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November 26, 2021

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# Metric Spaces and Normed Linear Spaces

## §1.1 Metric Spaces

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Let be any non-empty set. A *h o md j i* is a mapping which satisfies the *h o md ' s dj h n*. That is, for any ,

M1. iff ;

M2. ;

M3. .

The ordered pair is called a *h o md n k* .

## §1.2 Open Sets

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Let be a metric space. A set is said to be *j k* iff

# Differentiation