

Topology

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Contents

1	Topological Spaces.	5
2	Continuiuous functons.	7

Chapter 1

Topological Spaces.

Definition 1.1. A topology on a set X is a collection \mathcal{T} of subsets of X such that

- (T1) ϕ and X are in \mathcal{T} (ref:T1);
- (T2) Any union of subsets in \mathcal{T} is in \mathcal{T} ;
- (T3) The finite intersection of subsets in \mathcal{T} is in \mathcal{T} .

Chapter 2

Continuous functions.

Definition 2.1. A topology on a set X is a collection \mathcal{T} of subsets of X such that

- (T1) ϕ and X are in \mathcal{T} (ref:T1);
- (T2) Any union of subsets in \mathcal{T} is in \mathcal{T} ;
- (T3) The finite intersection of subsets in \mathcal{T} is in \mathcal{T} .

Proof. It is trivial

□