Topology

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## 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)  $\phi$  and X are in  $\mathcal{T}$ ;
- (T2) Any union of subsets in  $\mathcal{T}$  is in  $\mathcal{T}$ ;
- (T3) The finite intersection of subsets in  $\mathcal{T}$  is in  $\mathcal{T}$ .

This is the first chapter

# Chapter 2

# Continiuous functions.

Up to there is none.