Abstract

Topology & Topological Space

Let X be a nonempty set and τ be a family of subsets of X (i.e., IP(X) . We say τ is tipology on X if satisty the following conditions:

(1) X ,$\phi \epsilon \tau$

(2) If $\cup$, V ϵ τ , then $\cup \cap$ V ϵ τ

The finite intersection of elements form τ is again an element of τ.

(3) If $\cup_{a}$ ϵ τ ; a ϵ A, then $\cup_{a \in A} \cup_{a} \in \tau \quad \forall a \in A$

The arbitrary (finite or infinite) untion of elements of τ is again element of τ .

We called a pair (X, τ) **topological space.**