Drafted Notes

The goal of this document is to begin our investigation of understanding wtf the Jordan Curve Theorem (JCT) is even talking about!

First Definitions

To establish context, we will define the following:

- Separation
- Connectedness
- Components
- JCT

Separation & Connectedness

Let X be a topological space. A **separation** of X is a pair U, V of disjoint nonempty subsets of X whose uninon is X. The space X is said to be **connected** if there does not exist a separation of X.

Componnents

Given X, define an equivalence relation on X by setting $x\ y$ if there is a connected subspace of X containing both x and y. The equivalence classes are called the **components** (or the "connected components") of X.

JCT

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