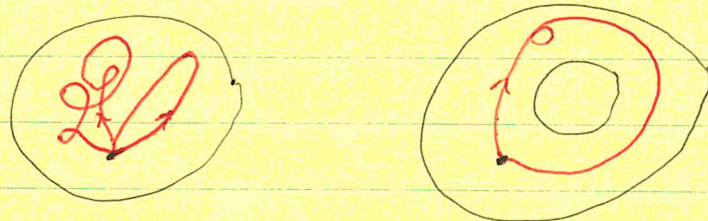


Ch 9

Algebraic Topology: The Fundamental Group

Given a class of topological objects we will associate to each an algebraic object, such as a group, in such a way that if two of the top. objects are homeo., then their associated algebraic objects are isomorphic.

Suppose we want to show that an open disk and an open annulus are not homeomorphic. Pick a pt in each, call it a "base point." In the disk any loop based at the base pt can be continuously deformed to the base pt. But in the annulus this is not true.



This observation is the key idea behind the Fundamental group of a top. sp.