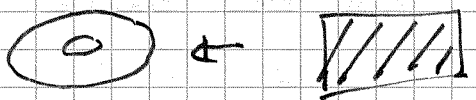
Generell topologi

Introduksjon

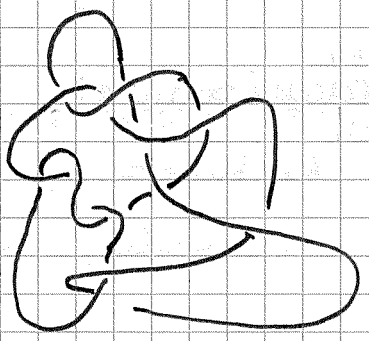
1 How to obtain a doughnut from a solid square



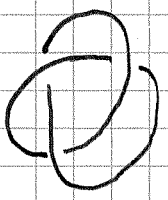
by "gluing"

2 How to prove that a knot cannot be untied

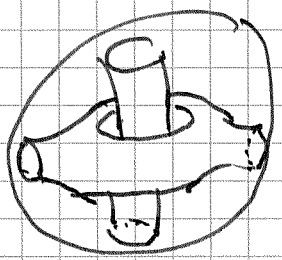
can be untied:



cannot be untied:

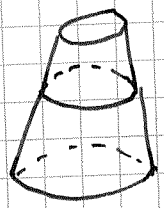


3 How to prove by "surgery" that a doughnut with three holes  is "the same" as a "hollow sphere with tunnels



4 Lots of "bending and stretching"

A circle is "the same" as a square



is "the same" as

geezer:

not "the same" as

Theme: Learn to think topologically and to match this intuition to rigorous argument

Organisation: Plan for the course

1) lectures 1-16 (roughly): foundation of topology (topological spaces, subspace/product/quotient topologies, continuous maps, Connectedness, Separation axioms, compactness

2) lectures 17-22: knot theory

3) lectures 23-28: Surfaces