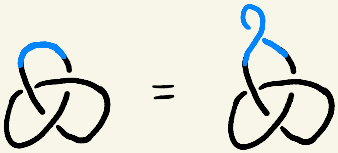
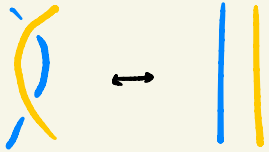
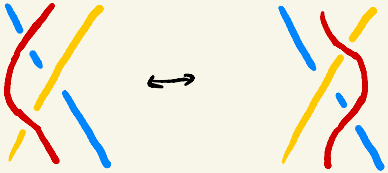
1. Reidemeister moves

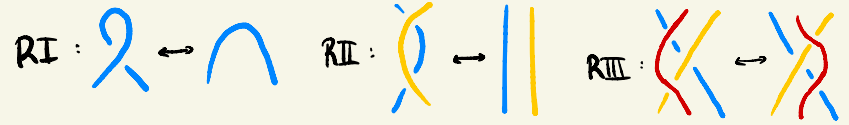
RI : 

Example: 

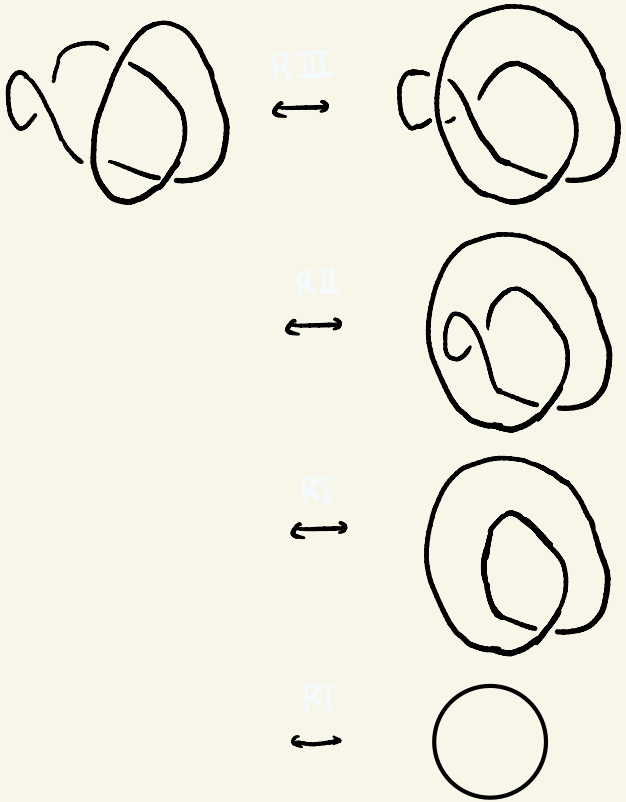
RII : 

RIII : 

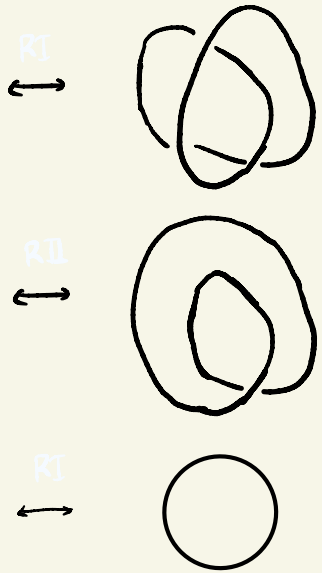
Theorem (Reidemeister): two link diagrams represent the same knot if and only if they are related by Reidemeister moves.



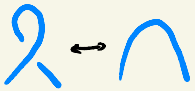
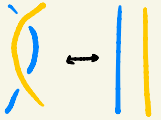
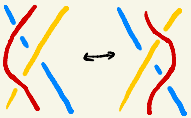
Example :



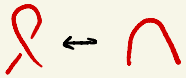
Different way :



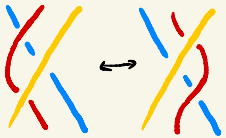
Q? Exercises

RI :  RII :  RIII : 

Prove the following :

Theorem: RII' :=  follows from RI, RII, RIII.

Proof: 

Theorem : RIII' := 

Proof :