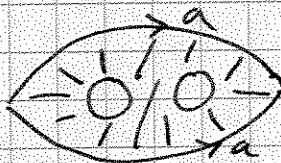


① (a)



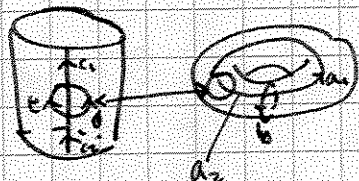
represents a disk:
 (Sphere minus disk)

(b)

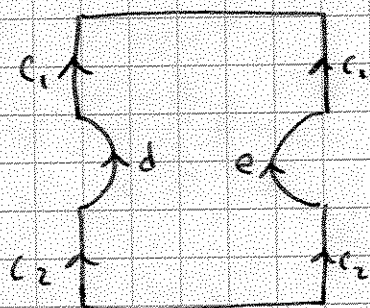


represents a
 cylinder: sphere
 minus two
 disks.

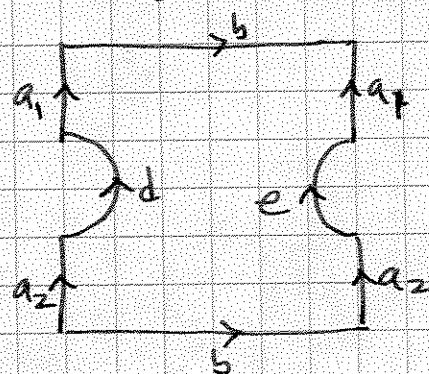
③ Cylinder # Torus : There are many ways to do this.
 Here is one.



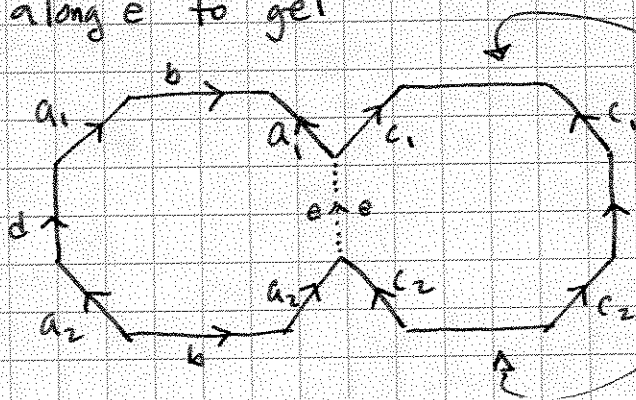
Cylinder - Disk



Torus - Disk

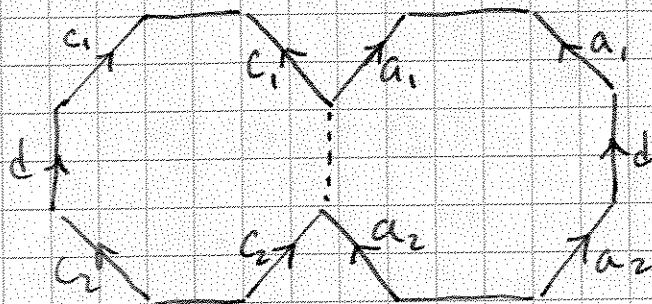


Joining these along e to get

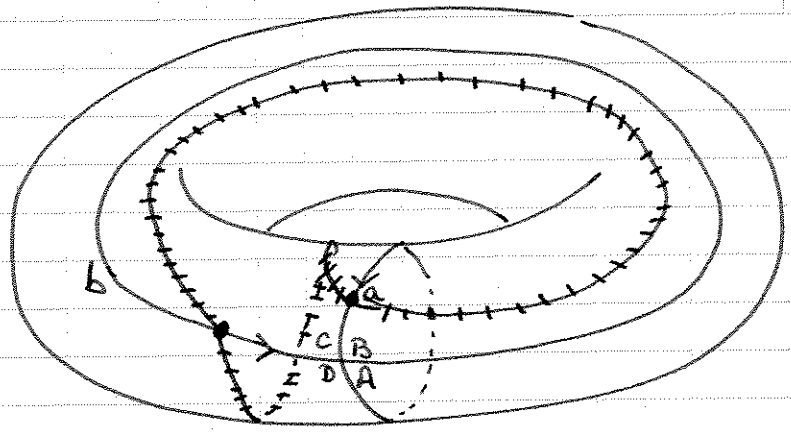
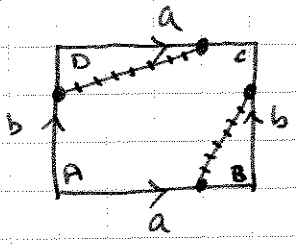


Two boundary
 circles
 result.

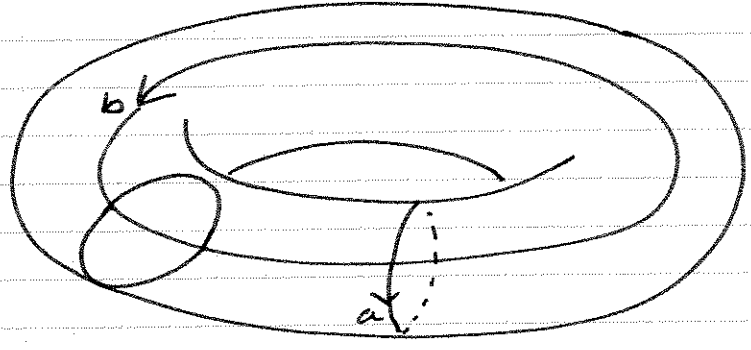
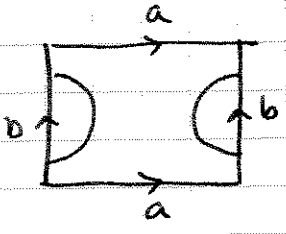
Two Cylinders: using the model for (Cylinder - Disk) given above:



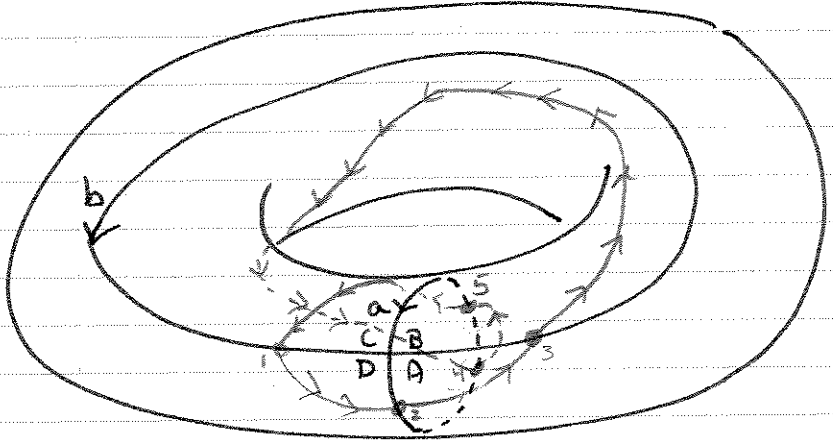
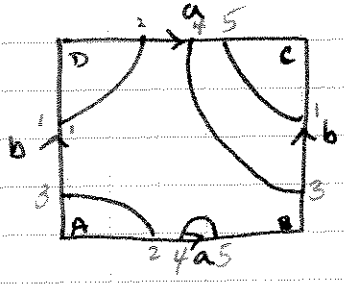
(4) (a)



(b)

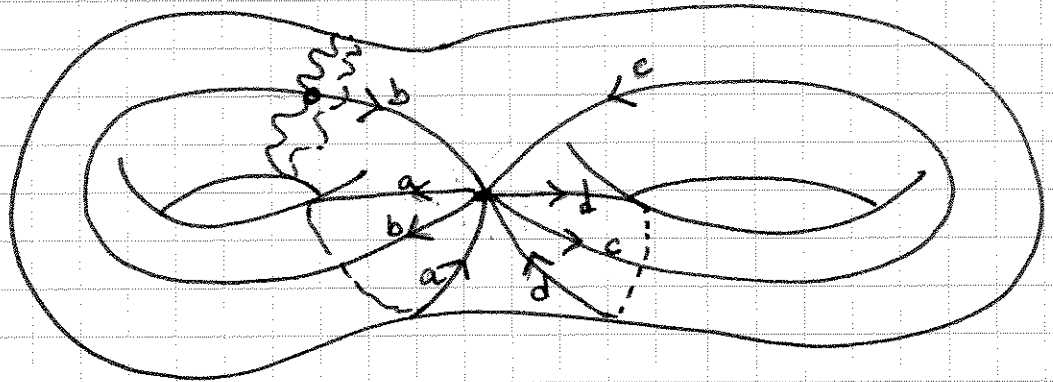
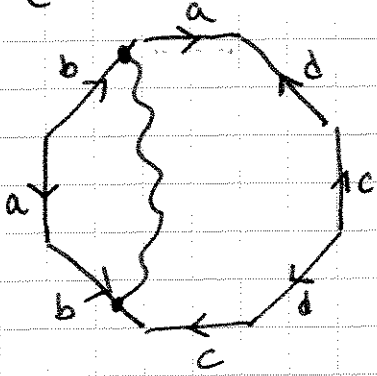


(c)

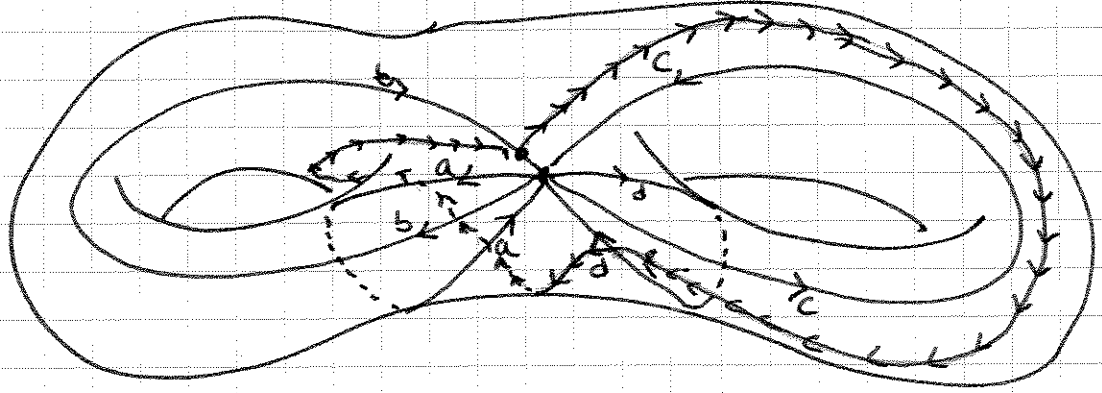
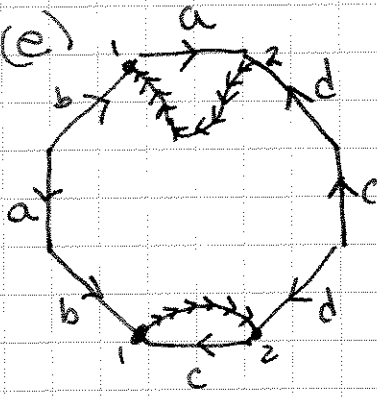


(d) ?

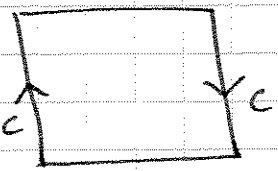
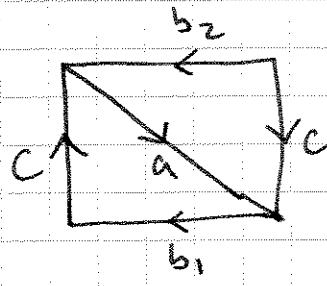
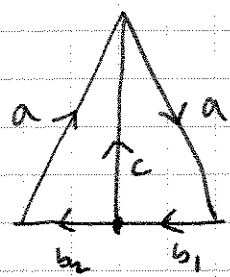
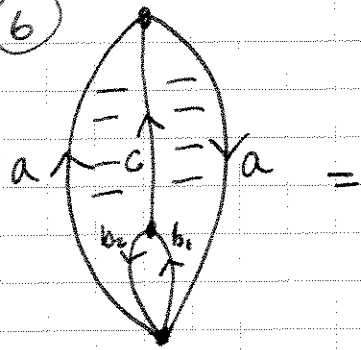
(d)



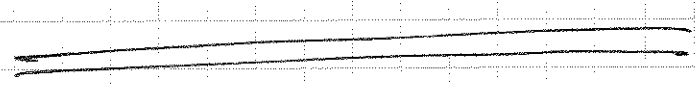
(e)



(b)



Projective Plane
minus Disk



Möbius Band