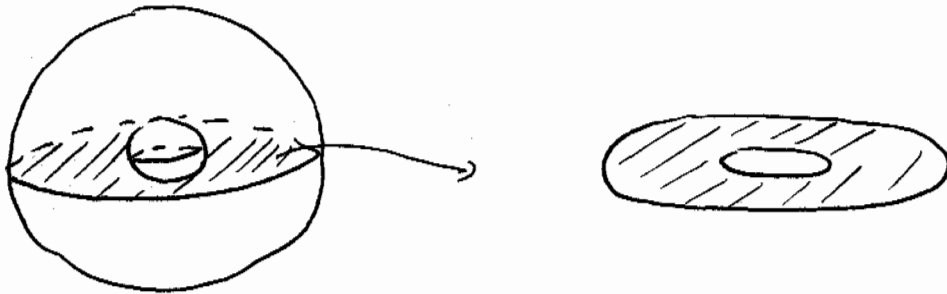


4/25/05

①

HW 11 SOLUTIONSExercise 9.3, page 253:

Look at the equatorial annulus in  $S^2 \times I$ , which is shaded below:



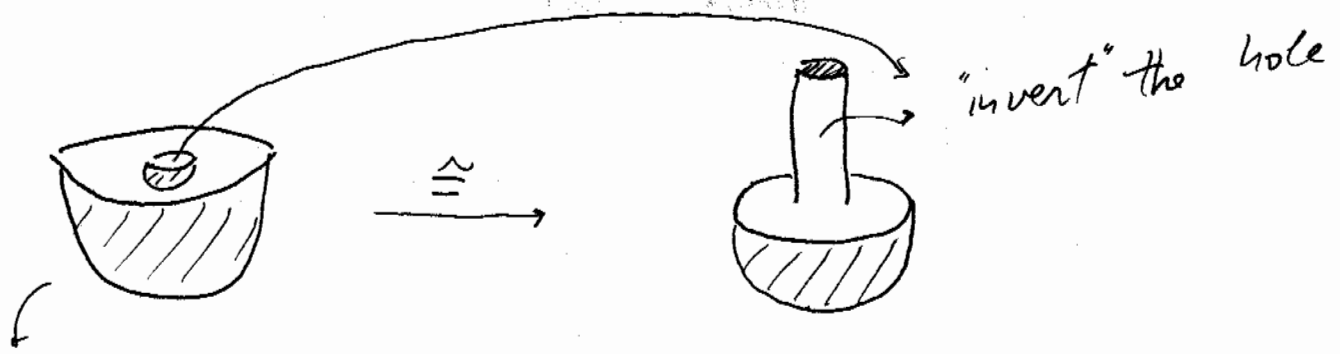
Identifying the inner and outer circles gives a torus (hollow).

What's left is 2 "bowls", or ~~two~~ solid hemispheres with a hollowed-out hemisphere:

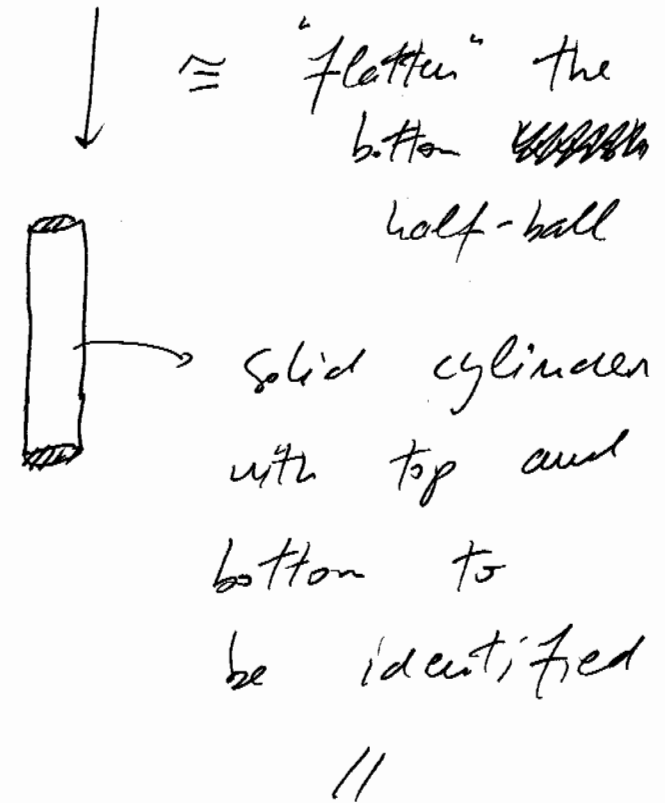


The inner and outer <sup>half-spheres</sup> ~~surfaces~~ in each picture have to be identified.

But each then gives a solid torus: (2)



shaded parts  
to be identified



Solid torus