Math 127
Homework 4 due on Wednesday, 3/8.

1. Take a strip of paper and make a Möbius band. Cut it down the central circle (that runs in the direction perpendicular to the one you glued along – just like we did in class during Samantha's project). What do you get? Explain why you got that. What do you think would happen if you divided a strip of paper into 4 equal pieces, then made a Möbius band and cut along the segments you marked. Why do you think that?

2. Explain how you might go around forming $S^2 \times S^1$? Does this manifold have flat geometry, spherical geometry, or neither? Explain your reasoning.