Space: Its Light, Its Shape.
Chapter 8: Orientability vs. Two-Sidedness

Assignment: For Wednesday, February 9, 2005

- Read Chapter 8.
- Though everyone is responsible for reading all of the material and for working out all of the exercises, teams have been assigned specific material and exercises for which they are responsible in class presentations. You may want to come to class early to firm up and smooth out the exercises with your teammates.

Team 3: What are we using to determine one or two-sidedness of a surface? What are the dimensions involved?

Team 4: Present Exercise 8.1.

Team 1: Present Exercise 8.2.

Team 2: Find a one-sided Möbius strip on one of the surfaces in Figure 8.2. Find a two-sided Möbius strip on another of the surfaces.

Team 3: What is the relationship between orientability and one-sidedness of surfaces within an orientable three-manifold?

Team 4: Describe the examples that illustrate the relationship between orientability and one-sidedness of surfaces within an orientable three-manifold.

Team 1: Is there a relationship between orientability and one-sidedness of surfaces within an nonorientable three-manifold?