

Assignment #4

1. Finish reading Flatland and be ready to discuss it. In particular, be ready to talk about: What methods were employed to help Square visualize three-dimensional space and objects? What are the analogous methods that we can use to visualize four-dimensional space and objects? What cross-sections can result when various three-dimensional objects pass through a plane? What is a sphere in four dimensions? What cross-sections can result when a sphere in four dimensions passes through three-dimensional space? What is the structure of a four-dimensional cube? What cross-sections can result when a four-dimensional cube passes through three-dimensional space? How can we use time as a fourth dimension?
2. Think deeply about a possible semester project. Take some time to look through various books and websites. The Mathematics Library is located in the basement of Patterson Office Tower. Think about different possible media—virtual, physical models, art, music, dance, poetry. We have been doing a lot with POV-Ray just to provide you with one nice tool, but your project need not be created with POV-Ray. Provide me with a brief written proposal.
3. If you have not turned in any past assignments, get caught up now!