1035-01-1142 **M. Alejandra Sorto*** (`sorto@txstate.edu`), 1808 Lancaster St., San Marcos, TX 78999. *The Mathematics of the Mayan Cross.*

In a recent trip to Guatemala, I discovered that Mayans have a geometric design called "La Cruz Maya" which is used to represent the Mayan ritual calendar. Its design has multiple mathematical characteristics. One of them is that it represents planar projections of many of the Mayan pyramids. In this presentation, I would like to present the design of a lesson that allows future middle school teachers explore geometrical transformations of the Mayan cross by generating similar "copies", superposing it on a 3-dimentional pyramid, and constructing one on their own. As the students explore how the design changes, they can relate measurements like perimeter, area, and volume for similar figures and objects; an activity that the Mayas probably engaged when constructing their pyramids. The lesson will address the following learning objectives: 1. Establish the relationship of perimeter and area of the Mayan cross with ritual calendar. 2. Determine when the new year of the Mayan ritual calendar and the lunar calendar would coincide. 3. Establish relationship between perimeter, area, and volume of similar figures and objects. 4. Describe how the Mayans could have use mathematical concepts embedded in the Mayan Cross to build the pyramids. (Received September 18, 2007)