

MA 501 Homework #3

Due Tuesday, January 29, in class

1. Practice using GeoGebra. Here are some useful sources of explanation:
 - (a) Introduction and Tutorials, http://wiki.geogebra.org/en/Tutorial%3AMain_Page. In particular, I recommend GeoGebra Quickstart for a good overview, but don't limit yourself to just this one.
 - (b) Tutorial Series, <http://mathandmultimedia.com/geogebra>.
 - (c) GeoGebraTube, <http://www.geogebraTube.org>.

Create and submit a sketch that you feel assists in understanding or exploring an important mathematical concept, explaining why this is so. You can email this to me (sketch and explanation) or submit to BlackBoard.

2. Go the course BlackBoard site and select "Course Content." Read the Introduction and Chapter 1 of the file "Focus in HS Geometry." This provides some examples of activities that lead from informal exploration, to systematic exploration, and to justification and proof, with connections to modeling. Be prepared to discuss this chapter; in particular, the advantages/disadvantages of these activities, and the role of the teacher in facilitating a mathematically rich discussion that culminates in the development of both mathematical content and mathematical process. Write up and submit your own solutions to the Rotating Square Problem and the Field of Vision Problem—either email it to me or submit to BlackBoard.
3. Go the website <http://illuminations.nctm.org> (I think you can access this even if you are not an NCTM member). Investigate some of the geometry activities and lessons and select one to tell the class about. You do not have to send anything to me.