Assignment #10
Due on Tuesday, 27 November, 2012.

Generalizing geometry

Read [1] or [2], which are different translations into English of Bernhard Riemann's *Habilitationschrift,* or both. Feel free to look up whatever else you need to answer the questions below.

1. What is Riemann's article about? What are the main ideas in it? *[7]*

2. Why is Riemann's article important? *[3]*

Reference

1. *On the Hypotheses which lie at the Bases of Geometry,* Bernhard Riemann, trans. by William Kingdon Clifford, *Nature* **8** (1873), pp. 14-17 & 36-37. Available online at: `http://www.emis.de/classics/Riemann/WKCGeom.pdf`

2. *On the Hypotheses Which Lie at the Foundations of Geometry,* Bernhard Riemann, trans. by Henry S. White, in *A Source Book in Mathematics* (1929), pp. 411-425. Reprinted by Dover Publications, Inc.; a preview of the book, including the translation above, can be read at: `http://books.google.ca/books?id=awAfO7Ff_zOC`