## MA 350 Dr. G. Stoudt Second Reading Assignment

# Readings

- Chapter II (The Rise of Theoretical Mathematics in Ancient Greece) Introduction, page 37
- Biography of Proclus, page 47
- Reading 5: From "The Catalog of Geometers"-Proclus
- Biography of Pythagoras of Samos, page 50
- Reading 7: From Book VII of the *Elements*: Definitions-Euclid
- Reading 8: From *Prior Analytics* i.23 (Irrationality of the Square Root of 2)-Aristotle
- Reading 10: From *Commentary on Ptolemy's Harmonics* (Arithmetic, Geometric and Harmonic Means)-Porphyry
- Reading 12: From Commentary on Euclid i (Sum of the Angles of a Triangle)-Proclus
- Reading 13: From *Convivial Questions* viii. 2. (Pythagoras' Theorem)-Plutarch
- Reading 14: From On Slips in Greetings 5-Lucian

# Questions for Discussion

### Introduction

- 1. What's the big deal about the "Catalogue of Geometers?"
- 2. What are the basic contributions of Pythagoras and his followers?
- 3. What is the "application of areas?"

#### Reading 7

- 1. What does it mean to "measure" a number?
- 2. Give an example of an "even-times even number" and an "even-times odd number."
- 3. We have different terminology for "prime to one another." What is our terminology?
- 4. How do the definitions of "plane" and "solid" differ from what you think or from more "modern" definitions?
- 5. Without using fractions, write out what "proportional" means.

#### Reading 8

1. This is a big one. Know this!

Reading 10

- 1. Look at the definition of the geometric mean. How does this relate to the terms of a geometric series?
- 2. Look at the definition of the harmonic mean. How does this relate to the terms of a harmonic series?

Reading 12

1. Look up the proof of this theorem in a geometry book. Write down the modern proof and compare the two.

Reading 13

1. What does this mean? In other words, what does application of areas mean here?