

A&S 153
#5 Readings on Regularity

Read Chapter 2 of the book by Cromwell. Write down brief answers to each of the following questions and be prepared to discuss them in class on Monday, October 9.

1. What associations were made between the Platonic solids and the “elements”?
2. What are the three basic Euclidean constructions?
3. What does it mean for a polygon to be constructible?
4. What is the golden ratio? What is its exact value? Where does it appear in a pentagon?
5. What five properties of regularity each lead to the five Platonic solids?
6. Archimedean solids are polyhedra with what properties?
7. Explain the significance of Figure 2.30.
8. Who are each of the following individuals? When did they live? What are they known for?
 - (a) Archimedes
 - (b) Euclid
 - (c) Kepler
 - (d) Plato
 - (e) Pythagoras