

## **Astronomy 103 Exam 1 – Review Sheet**

- Segment 1
  - Lecture Tutorial Sun Size – emphasized proportional reasoning through comparing the sizes of things – Earth, Moon, Lunar orbit, Sun, Earth Orbit
  - What's in the Solar System, Milky Way Galaxy, Universe (Worksheet)
    - Rank objects in order of increasing/decreasing distance
  - Special Units
    - What unit would you use to express the distance to a globular cluster?
  - Look-back time
- Segment 2
  - List the ways in which astronomy was important to ancient peoples
  - Describe the basic observations one can make in the night sky
    - Diurnal motions – all objects rise in the east and set in the west (except circumpolar stars)
      - Lecture Tutorial on Position
    - Planet's (and sun and moon) wander among background stars
    - Mars, Jupiter, and Saturn make retrograde loops at opposition
    - Mercury and Venus are always near the sun
    - Parallax was not observed
  - Describe the functionality of Stonehenge (ArcheoAstronomy Worksheet)
- Segment 3
  - Describe the Ptolemaic Geocentric model
    - Explain the basic observations in terms of this model (Ptolemaic Model Worksheet)
- Segment 4
  - Describe the Copernican Model
  - Know Elongation (Worksheet) and the special configurations
  - Know Sidereal/Synodic Periods
- Segment 5
  - Kepler's Laws
    - NAAP Lab
    - Lecture Tutorial Kepler's 2nd Law
- Segment 6
  - Galileo (telescope usage)
    - Scientific Method
    - Describe observations made in support of Copernican Model
  - Newton
    - 3 Laws of Motion (Worksheet)
    - Law of Gravity (Worksheet)