

Homework #12
AS101 Summer 2006
Dr. Withers

Assigned: 2006.06.22
Due: 2006.06.23, start of class

- 1) Read Chapter 12
- 2) The typical density of a comet is 1 g / cm^3 . What is this density in units of kg / m^3 ?
- 3) Why are there gaps in the asteroid belt?
- 4) Which formed closer to the Sun - objects in the Oort Cloud (source of long-period comets) or objects in the Kuiper Belt (source of short-period comets)?
- 5) The impact of an asteroid or comet led to the extinction of the dinosaurs 65 million years ago. Read the relevant section in the textbook and decide which of the following statements is most accurate.
 - A) By an unexpected coincidence, New York City was built at the same place that this impact hit Earth.
 - B) The presence of iridium, a rare metal, in rocks dating from 65 million years ago is strong evidence for an asteroid or comet hitting Earth at that time
 - C) Dinosaurs died because the impact melted the entire crust of Earth
 - D) The chance of an impact as large as the impact that killed the dinosaurs happening in the next 20 years is 50%.