PROBLEM SET # 2

This problem set is intended to help you review some of the concepts in Chapters 4-6 of *Life in the Universe* by Bennett & Shostak, 3rd Edition.

*REMINDER: Type your answers to all the short-answer/essay questions!* This will make it easier for your TA to read and grade your homework. *Handwritten homeworks will be docked 20%.*

**Problem 1. (2 points)**
B&S, Ch. 4, Q50, p. 148. Dating Lunar Rocks. (Hint: check out the radiometric dating example under Cosmic Calculations 4.1 on p. 112)

**Problem 2. (1 point)**
B&S, Ch. 4, Q53, p. 148. Internal vs External Heating. Make sure to answer all of the questions. (Hint: the surface of a sphere is $4 \pi R^2$, where $\pi$ is approximately 3.1416 and $R$ is the radius of the sphere).

**Problem 3. (1 point)**
B&S, Ch. 5, Q40, p. 190. Artificial Selection. Limit your answer to one or two paragraphs (~10 sentences or less). *Your answer must be in your own words.*

**Problem 4. (1 point)**
B&S, Ch. 6, Q49, p. 236. Bacterial Evolution. Make sure to answer all of the questions. (Hint: Use Cosmic Calculations 6.1 on p. 203)