Lab 2 - Questions (Same as in Assignment 2)

Use the conversion programs that you have written to answer these questions.

Questions are answered by doing a write up as a .md or .markdown (text) file in lab. The write-up should be written in Visual Studio Code (VS Code).

Use markdown https://www.markdownguide.org/cheat-sheet/ for the formatting of your text file answers.

This portion should be turned in as a part of your lab.

It is worth 100pts.

1. 5pts - What is the closest star to planet Earth? Think! It shines on you every day.
2. 10pts - Approximately how many exoplanets have been identified? (Use Google) Explain why you think this answer from Google and other sources is valid. Find a list of Kupier belt objects. How many are there? How far is it to the Kupier Belt in miles and kilometers? How far is it to the Oort Cloud in miles and kilometers?
3. 10pts - How far is it to the Trappist-1 system In Light Years? In miles and kilometers in our model, how far to this system?
4. 10pts - At the speed of light how far is it from Laramie to Tokyo Japan? Answer in fractions of a second.
5. 10pts - If the Sun in our model is the size of a tennis ball, then how far is to Proxima Centauri 4.3 light years from us? In Miles and in kilometers? In Feet and meters?
   Calculate for our tennis ball model the number of miles
   that 4.3 light years represents. Using Google Maps - find a city that is approximately the same number of miles from Laramie to that city as our model calculates. How long will it take you to drive from Laramie to that city? Use appriximate number of hours of driving time from Google Maps. Will you be able to see the tennis ball from that location? (Yes/No)
6. 5pts - Using the same calculation, L 95-59 is 35 light years from Earth. Use your program to calcualte the number of miles and kilometers to L 95-59. For the tennis ball model calculate the number of miles in our model to L 95-59?
7. 15pts - If the Sun is a tennis ball, how big are each of the planets - in inches or thousandths of an inch?
8. 5pts - How big is the Moon in thousandths of inches in our model and how far from Earth in inches?
9. 5pts -How far is it to the Kupier Belt in miles and kilometers? How far in miles in the tennis ball model? If you are in Prixies Pasture at the “family” statue, put the Sun there - where will the Kupier Belt be?

10. 5pts - How far is it to the Oort Cloud in miles and kilometers? How far in miles in the tennis ball model? If you are in Prixies Pasture at the “family” statue, put the Sun there - where will the Oort Cloud be?
11. 10pts - Cygnus-x-1 is at the center of the Milky Way Galaxy, 29,000 light years from earth. How many miles is that?
12. 10pts - Ligo detected a black hole merger https://www.ligo.caltech.edu/news/ligo20200902 of gw190521. How many light years is that away from earth? (See: https://en.wikipedia.org/wiki/GW190521. How far away is that in miles? Use 1,000,000,000 for a billion.

Write up your answers in a text file (not Microsoft Word, or .pdf).

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