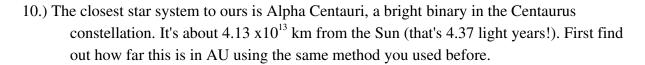
Relative Sizes of the Planets	Name:
	Lab Section:
A) Table 1 Instructions:	
Using the values in the following table convert the semi-major distance from the Earth to the Sun by dividing each semi-major	
Next, you will do the same thing for each planet's diameter to into diameters relative to the Earth's diameter.	convert them from kilometers
Finally, you will convert these values to scale values so that value in the classroom. To do this, you will multiply all of your sen will multiply all of your diameters (in terms of Earth diameter	ni-major axes by 3 m. Then you
Assigned planet from your TA:	
m	
Using the scale distance recorded in the last column of the tal- toe steps would you have to make in order to go from the Sur- dividing that distance by the size of your shoe in meters from	to your assigned planet by
Your teacher will mark the location of the Sun. Each of you distance. Be sure to label it so everyone knows what planet it	
B: Supplemental Questions:	
As always, show work and units!  1.) Name the planets in order of <u>increasing mass!</u>	
	,

2.) How many times more <u>massive</u> is Jupiter than Earth?

3.) How many times farther from the	ne sun is Pluto than Jupiter?
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7.) Find the density of Saturn in units of 
$$g/cm^3$$
 using the equation: 
$$Density = \frac{Mass}{\frac{4}{3}\pi radius^3}$$



\_\_\_\_AU

Now find out how far this will be in your scale distance where 1AU = 3 m. To give you a feel for how far you'd have to walk to put this star into the scale system we made earlier, convert this to miles by dividing your new answer by 1,600.

\_\_\_\_\_ m => \_\_\_\_ mi

For reference, New Orleans is about 480 miles from Atlanta.

<sup>8.)</sup> Would Saturn float or sink if it were placed over an ocean (density of water is 1g/cm<sup>3</sup>)?

<sup>9.)</sup> Add up the masses of the planets. Divide the mass of the Sun by that number to find out how many times more massive the Sun is than the rest of the Solar System. What percentage of this total planetary mass is Jupiter?