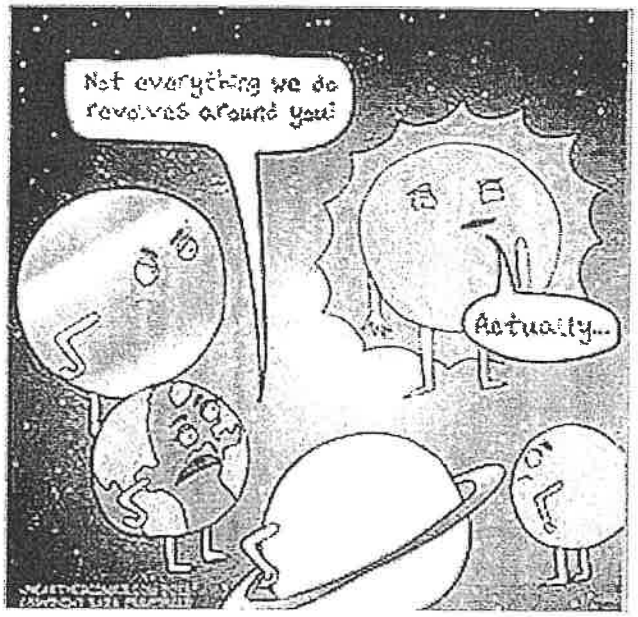
Names/Numbers:

_____, _____

_____, _____

Astronomy to Scale Group Project

1. Use the scale provided to convert distances to mm
    a. Do your calculations on binder/graph paper in dimensional analysis and staple to this paper to make one group packet.
    b. Make sure all your calculations are CLEARLY labeled with which astronomical body it is for, calculated answer, and ~~sig-fig answer~~
2. Mark and label astronomical bodies on the 7m adding machine paper that has been provided (1 per group)
    a. First mark and label the sun about 3 cm from the right end of the paper, then continue with the remaining bodies
    b. All distances are from the sun
    c. Label the distances in A.U. or ly
3. If you run out of room on the adding machine paper, make a note at the left end of the paper of where the body should be.



scale	1	mm	=	1390000	km			
sun diam				1390000	km			
1 A.U.	1	AU	=	149600000	km			
light Year	1	ly	=	9.46×10^{12}	km			
							Actual-	
Mercury							0.387	AU
Venus							0.722	AU
Earth							1.00	AU
Mars							1.52	AU
Jupiter							5.20	AU
Saturn							9.58	AU
Uranus							19.2	AU
Neptune							30.1	AU
Pluto							39.5	AU
Kuiper Belt Inner edge							3.0 x 10	AU
Kuiper Belt Outer Edge							5.0 x 10	AU
Asteroid Inner Edge							2.0	AU
Asteroid Outer Edge							4.0	AU
Oort Outer Edge (low est.)							50,000	AU
Oort Outer Edge (high est.)							100,000	AU
Proxima Centauri (dist from sun)							4.22	ly
Andromeda Galaxy (dist from sun)							2.0×10^6	ly
Sagittarius Dwarf Galaxy (dist from sun)							75,000	ly