

The purpose of this intro is demonstrate how the mass of an object, not an object's volume, determines the object's gravity. Gravity is the force that pulls all objects with mass toward each other.

Table 1 below contains data on four objects: Earth, Sun, a white dwarf star and a neutron star (the last two are examples, not specific stars).

<u>Object</u>	Mass (kg)	Volume (km ³)	Density (kg/ km ³)
Sun	198900000000000000000000000000000000000	1409502371833330000	
Earth	5972000000000000000000000000000000000000	1083210000000	
White dwarf	212400000000000000000000000000000000000	1194420000000	
Neutron star	27846000000000000000000000000000000000000	121	

1. Calculating the density of each object to complete the data table. *Density equals mass divided volume*.

2. Any object with matter has gravity. More massive objects have more gravity. Knowing this, list the objects in Table 1 in order from greatest to least gravity.

Gravity	Object
Greatest	
2 nd greatest	
2 nd least	
Least	

3. Create a graph showing the relationship between an object's mass and gravity. Use the four objects in Table 1.