1) Read Chapter 4

2) Newton’s Law of Gravity is \( F = \frac{G M_1 M_2}{d^2} \), where \( G \) is \( 6.67 \times 10^{-11} \text{ m}^3 / (\text{kg s}^2) \). Use this equation to find the units of the force \( F \) in terms of kg, m, and s.

3) Suppose another solar system has a star that is four times as massive as the Sun and a planet called Banana. If Banana is ten times as massive as Earth and orbits its star at 1 AU, what is its orbital period? [HINT - It is possible to do this question without a calculator]

4) What is the velocity of a car driving at the speed limit on the freeway from Boston to Florida?

5) What causes tides?