

CIEG 305 Homework 1 DUE FRIDAY SEPTEMBER 14, 2007



1. Convert furlongs per fortnight to parsecs per year
2. P1.6 White
3. What is the weight of 1 U.S. gallon of water in pounds, newtons and dynes. Show work.
4. P1.11 White
5. A 1-ft diameter cylindrical tank that is 5 ft long weighs 125 pounds (lb) and is filled with a liquid having a specific weight of 69.6 lb/ft^3 . Determine the vertical force required to give the tank an upward acceleration of 9 ft/s^2 .
6. The specific weight of a certain liquid is 85.3 lb/ft^3 . Determine its density and specific gravity.

EXTRA CREDIT P1.20 White. Plot $V(t)$ and $z(t)$ for drag and no drag cases. For this problem, I am going to **require** that you use the mathematics software, Matlab. If you have never used Matlab, then this is a great time to learn and I am here to help.