Wentworth Institute of Technology Engineering Physics I, Fall 2015
Instructor: Dr. Marissa Vogt

Name:

Unit Conversion Worksheet (will be graded as a problem set)
Due: before 4:30 p.m. in my mailbox in Ira Allen 316 *or* turned in at the beginning of class, Thursday, September 24, 2015.
Remember to write down the names of any classmates you worked with. Show your work for full credit. If you do not show your work you will receive only partial credit.

You may need the following conversions: 1 mile = 1.609 km
You should know all the other needed conversions (cm to m, seconds to hours, etc.)

Convert the following to MKS units:
300 cm^2

30 seconds

$7x10^4$ g/cm^3

10 cm/day

60 miles/hour

Convert the following to CGS units:
2 km^2

4 mm

60 miles/hour

1 kg

Using $x(t) = x_0 + v_{0,x}t + 0.5a_xt^2$:

- How far will an object travel in 1 minute if:
  1) initial velocity is 30 miles per hour, no acceleration

  2) initial velocity is 10 cm/s, acceleration is due to gravity (9.81 m/s^2)

- How long does it take an object to fall 10 cm if there is no initial velocity and the acceleration is due to gravity (9.81 m/s^2)?