Homework 1 PHYS 211 Dr. Amir

1. How many significant figures do each of the following numbers have: (*a*) 214, (*b*) 81.60, (*c*) 7.03, (*d*) 0.03, (*e*) 0.0086, () 3236, and (*g*) 8700?
2. Write the following numbers in powers of ten notation: (*a*) 1.156, (*b*) 21.8, (*c*) 0.0068, (*d*) 328.65, (*e*) 0.219, and () 444.
3. Add ($9.3×10^{3}s)+\left(8.3×10^{4}s\right)+(0.008×10^{6}s)$
4. Write the following as full (decimal) numbers with standard units: (*a*) 286.6 mm, (*b*) 85μV (*c*) 760 mg, (*d*) 60.0 ps, (*e*) 22.5 fm, () 2.50 gigavolts.
5. Determine your own height in meters, and your mass in kg.
6. Determine the conversion factor between (*a*) kmh and mih, (*b*) ms and fts, and (*c*) kmh and ms.
7. The diameter of the Moon is 3480 km. (*a*) What is the surface area of the Moon? (*b*) How many times larger is the surface area of the Earth?
8. (a) How many seconds are there in 1.00 year? (b) How many nanoseconds are there in 1.00 year? (c) How many years are there in 1.00 second?