**Physics: Chapter 1 Test Study Guide**

1. What is physics? What is the goal of physics?
2. What are the standard units for length, mass, time, and volume?
3. Know table 1.4. This is the table with the common prefixes.
4. Know what is dimension is being measured by the units being used. (Example: what is measured when you see m2)
5. When adding scalars do the units need to be the same? Subtracting? Multiplying? Dividing?
6. Be able to do dimensional analysis. Don’t forget to label the units.
   1. Convert 17kg to mg
   2. Convert 8 miles to km
   3. Convert 4 meters to feet
   4. Convert 18 m/s to miles/hour
7. Be able to identify the number of significant figures in a number
   1. 200
   2. 220.
   3. 1.7 x 104
   4. 0.004
   5. 17.0005
8. Be able to do math operations resulting in the proper answer with the correct number of significant figures.
   1. (1.7)(3.44)
   2. (3.24) / (1.774)
   3. (4.2) + (4.75)
   4. (8.994) – (4.12)
9. Be able to make estimates using order-of-magnitude.
   1. What is the height of an average male in cm?
10. Be able to write numbers in scientific notation. Be able to write numbers in scientific notation out.
11. You will need to know how to use the Pythagorean theorem for one problem.
    1. a2 + b2 = c2