HONORS CHEMISTRY – UNIT 1 REVIEW

1. For each of the following, round to the indicated number of SigFigs and write in correct scientific notation:

   29086.59 (to 4 SigFigs) _____

   3490×10^4 (to 3 SigFigs) _____

2. How many SigFigs are in the following numbers?

3030.00	_____	22900.	_____
2.900×10^4	_____	2810110	_____
4000000	_____	0.000880	_____

3. In the following measurements, which digit is estimated?

   390.0 m _____

   180 g _____

   1000 cm _____

4. Perform the following calculations. Round your answer to the correct number of SigFigs:

   $$\frac{(2.98 \times 10^4)(3.776 \times 10^{-16})}{(3.9 \times 10^{-12})(5 \times 10^4)} =$$

   $$\frac{(3.45 + 2.4 + 8.900)}{4.987 \times 10^6} =$$

5. Convert the following. Record your answer with correct SigFigs:

   3.90 m = _____ mm

   2.098×10^4 g = _____ cg

   9.00L = _____ kL

   34560 mL = _____ dm^3

6. Perform the following conversions using dimensional analysis. Round your answer to correct SigFigs and put it in correct scientific notation:

   3.598mL = ? gal

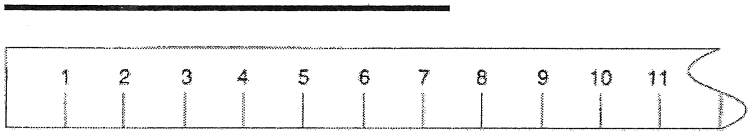
   3500 miles = ? mm

2400. cg = ? pounds

398 miles per hour = ? m/sec

7. A cube-shaped object has dimensions of 5.00cm on each side and has a mass of 188.70g. Calculate the density in g/mL

8. Measure the length of the line above the ruler with the correct amount of precision: _____ cm



9. In the problem below, the correct units for the answer would be: _____ and the answer would contain _____ SigFigs

$$\frac{3.4\ \text{gaggles} \times 9.80\ \text{fraggles}^2 \times 22.98\ \text{baggles}}{3.900\ \text{fraggles} \times 800.\ \text{gaggles}}$$

10. What is the difference between accuracy and precision? Can you have one without the other? Give an example of each: