Workshop 2 – Scientific Notation and Scientific Calculators

1. Write each of the following numbers in proper scientific notation:

    (a) 587   (a) _____

    (b) 0.0077   (b) _____

    (c) 9,200   (c) _____

    (d) 406.0   (d) _____

    (e) 13,800,000   (e) _____

    (f) 0.0004   (f) _____

2. For each of these problems, complete the answer with a 10 raised to the proper power. Note that each answer is expressed to the correct number of significant figures.

    (a) $(1.73 \times 10^3)(2.0 \times 10^3)$ =   (a) $3.5 \times$ _____

    (b) $\dfrac{6.477 \times 10^5}{3.62 \times 10^3}$ =   (b) $1.79 \times$ _____

    (c) $(5.7 \times 10^3)(2.6 \times 10^5)$ =   (c) $1.5 \times$ _____

    (d) $\dfrac{2.75 \times 10^{-6}}{2.3 \times 10^3}$ =   (d) $1.2 \times$ _____

    (e) $\dfrac{5.80 \times 10^4}{9.53 \times 10^7}$ =   (e) $6.09 \times$ _____

3. Solve each of the following problems, expressing each answer to the proper number of significant figures. Use scientific notation.

    (a) $(7.55 \times 10^2)(2.83 \times 10^8)$ =   (a) _____

    (b) $\dfrac{(6.51 \times 10^{-2})(7.07 \times 10^{-5})}{2.92 \times 10^3}$ =   (b) _____

Name: _____   Section: _____

<u>**Scientific Calculator**</u>

4. Write down the Brand and series number of your Scientific Calculator.
   Example: Texas Instruments TI-30XIIS

   Find at least one other student with the same brand and version of calculator (you may consider working with them for the remainder of this assignment).

5. Enter Avogadro's Number (6.022×10^{23}) into your calculator. Write down the sequence of buttons you used to enter a number in scientific notation on your calculator:

6. The diameter of a penny is 0.01905 meters. Convert this number into scientific notation and then enter into your calculator. Write below what button(s) would allow you to convert the number back to "standard" notation on your calculator.

7. Use this number for all the questions in this problem: 10^{-3}

   Write it as a fraction _____

   Write it as a decimal _____

   Enter into your scientific calculator. Which button(s) did you use to input?