CONCEPT: MULTIPLICATION AND DIVISION

When you multiply values in scientific notation you _____ the coefficients and _____ the exponents.

$$(A \times 10^{x}) \cdot (B \times 10^{y}) =$$

When you divide values in scientific notation you _____ the coefficients and _____ the exponents.

$$\frac{(A \times 10^{x})}{(B \times 10^{y})} =$$

After multiplying and/or dividing remember that for the coefficient will have the _____.

EXAMPLE 1: Using the method discussed above, determine the answer when the following values are multiplied.

$(2.134 \times 10^{5}) \cdot (1.6 \times 10^{-3}) \cdot (3.07 \times 10^{6})$

EXAMPLE 2: Using the methods discussed above, determine the answer for the following mixed operations question.

$$\frac{(7.33 \times 10^{8}) \cdot (9.89 \times 10^{-1})}{(6.12 \times 10^{11})}$$

PRACTICE: MULTIPLICATION AND DIVISION

EXAMPLE: Perform the following calculation to the right number of sig figs:

$$\frac{(9.12\times10^{-5})+(6.33\times10^{-3})}{(1.15\times10^{7})-(3.72\times10^{6})}$$

PRACTICE 1: Perform the following calculation to the right number of sig figs:

$$\left[\frac{(11.422-0.800)+(8.0+1.115)}{0.0720}\right]\cdot 1.33\times10^{-5}$$

PRACTICE 2: Compute the following and determine the correct number of significant figures in the answer:

$$\frac{342.60\,(49.37+0.0063+897.10)+9.0287\,(87.001\times10^{2})}{(403.0\times10^{-19})+(-16\times10^{-20})}$$