Name:_____

Chemistry   Math Skills Pretest

Objective: SWBAT reassess math skills and apply those skills to chemistry related problems.

I. Part One: Basic Skills

Addition	Subtraction
$\begin{array}{r}212\\+\ 576\end{array}$ $\begin{array}{r}48\\+\ 17\end{array}$ $\begin{array}{r}1293\\+\ 123\end{array}$	$\begin{array}{r}512\\-\ 276\end{array}$ $\begin{array}{r}48\\-\ 17\end{array}$ $\begin{array}{r}1293\\-\ 123\end{array}$
Multiplication 12 *7 = 76*43 = 298 * 14=	**Division** 175 / 5= 212 / 4= 63 / 9=
Factoring 2(4+5) = 6(4+4) = 9 (15 – 2) + 7 =	**Algebra** 2(4+x) x = 1 6(4+x) x = 4 9 (15 – x) x = 2
Write the following numbers in <u>scientific notation:</u> 654,000 0.000000251 10034000	**Write the following in decimal form:** 4×10^{5} 3.4×10^{-6} 3.00102×10^{4}
Addition and Subtraction $(3.5 \times 10^{4}) + (4.1 \times 10^{3})$ $(7.2 \times 10^{-6}) - (8.2 \times 10^{-7})$	**Multiplication and Division** $(3.5 \times 10^{17}) * (2 \times 10^{7})$ $(6 \times 10^{6}) / (4 \times 10^{5})$

II. Part 2: Applied Math

    a. Rearranging Equations

        1. Solve the following equation for m $$d = \frac{m}{V}$$

        2. Solve the following equation for P $$PV = n\,r\,t$$

        3. Solve the following equation for n $$PV = n\,r\,t$$

    b. Multi Variable Algebra

        1. Given the following, use the equation **PV = nrt** to solve for P

                V= 20 ml

                N = 5 moles

                R = .0821 K mole/ L atm

                T = 298 K

                P= ?

    c. Unit Conversions

        1. Convert 3.2 feet into inches (1 ft = 12 inches)

        2. Convert 2.4 kilograms into grams (1 kg =1000g)

        3. Convert 6 years into seconds

    d. Graphing

        1. Graph the following data

X	Y
3	6
2	4
1	2
-1	-2