Measurement HW - 1 Name _____.

1. In your own words, describe the differences between qualitative and quantitative measures. Give an example of each that does not pertain to your teacher's mass.

2. Explain the difference between the vocabulary words accurate and precise.

3. Put these chemical symbols in density order, with the lowest density element at the top:

   platinum, mercury, lead, titanium, niobium, and silver

symbol	name	density g/cm^3

4. Write one short paragraph about something that you like, to help me get to know you a little better. This question is not graded, but will help us "bond" academically (which is a chemistry vocabulary word for another day!)

Measurement HW - 2 Name _____

1. A piece of unknown metal is determined to have a volume of 84.6 mL and a total mass of 752.94 grams. Determine which metal it could be. Write a formula first, use units!!! Watch out for SF!

2. Convert 114°C to Kelvin. Write a formula or it's wrong.

3. Convert 28.0°C Kelvin also. Write a formula or it's wrong.

4. Convert 370. Kelvin to centigrade. Write a formula or it's wrong.

5. Convert 239 K to °C also. Write a formula, or it's wrong.

10 grams	20. mL	30.0 Qts	40.1 grams
50.01 kg	0.80 meters	1.09 atm	70.0 grams/cm^3
60.00 grams	400 miles	6.02×10^{23} atoms	The quotient of 3.45 grams and 6.003 cm^3
3.00×10^{-22} moles of H^{+1}	The product of 333.45 miles and 6.30 hours	The sum of 34.5 grams and 20. grams	The difference between 88.3°C and 36.3°C

Measurement HW #3 Name _____

Show all work Write big enough to see. Watch out for SF.

$(4.0 \times 10^{4}) \times (6.0 \times 10^{5}) =$	$(4.8 \times 10^{3}) - (2.2 \times 10^{2}) =$	$(1.4 \times 10^{-5}) \times (5.67 \times 10^{-6}) =$
$(6.0 \times 10^{15}) \div (4.0 \times 10^{4}) =$	$(3.40 \times 10^{-3}) + (2.1 \times 10^{-2}) =$	$(5.60 \times 10^{12}) \times (7.102 \times 10^{4}) =$
$(2.456 \times 10^{7}) + (6.034 \times 10^{8}) =$	$(3.04 \times 10^{5}) \div (9.89 \times 10^{2}) =$	You have measured the mass of carbon to be 849.9 g but the actual mass is 860.0 grams. What was your percent error? Explain why your answer is positive or negative.

Measurement HW #4 Name _____

Write BIG, write neat, show ALL UNITS. It's the set up + the thinking that are important.

1. You measure your height to be 66.4 inches, but your teacher wants you to convert that using dimensional analysis into your height in MILES. (this is a small number) Use units I gave you - stay off of the internet!

2. You watched the women's marathon Olympic race and realized your true calling. You too want to run 26.2 miles at once, and get to wear the cute wreath on your head when you win. Convert that distance to millimeters using proper sig figs.

3. Convert your #2 answer into scientific notation. _____

4. A large hole was dug by a person with a bull dozer. It filled up with 379,300 gallons of rain over the past year. How many milliliters of water is that? (0.946 Liters = 1 quart)

5. Convert your #4 answer into scientific notation. _____