Measurement HW - 1

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 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

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symbol	name	density g/cm <sup>3</sup>

4. Write a word, or a short sentence, using just the element symbols from the periodic table. Example:

TeAcHEr is element # 52, 89, 1, and 68.

Measurement HW - 2

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.

30.0 Qts 10 grams 20. mL 40.1 grams 70.0 grams/cm<sup>3</sup> 50.01 kg 0.80 meters 1.09 atm The quotient of 3.45 grams 6.02 x 10<sup>23</sup> atoms 60.0009 grams 400 miles and 6.003 cm<sup>3</sup> 3.0 x 10<sup>-22</sup> moles of H<sup>+1</sup> The product of 333.45 miles and 6.30 hours The difference between 88.3°C and 36.3°C The sum of 34.5 grams and 20. grams

How many SF in each of the measurements below? Write the number, or UN for unlimited SF in each box

Measurement HW 3

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

$(4.0 \times 10^4) \times (6.0 \times 10^5) =$	$(4.8 \times 10^3) \square (2.2 \times 10^2) =$	$(1.4 \times 10^{-5}) \text{ X} (5.67 \times 10^{-6}) =$
$(6.0 \times 10^{15}) \div (4.0 \times 10^4) =$	$(3.40 \times 10^{-3}) + (2.1 \times 10^{-2}) =$	$(5.60 \times 10^{12}) \text{ X} (7.102 \times 10^4) =$
$(2.456 \times 10^7) + (6.034 \times 10^8) =$	$(3.04 \times 10^5) \div (9.89 \times 10^2) =$	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.

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. 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)