**Quiz 2A**

# Directions: Answer each of the following questions. Be sure to use complete sentences where appropriate. For full credit be sure to show all of your work. Where appropriate answers should be boxed for clarity, written to the correct number of significant figures, and, include the proper units.

1. Classify each as an element or a compound (4 points).
	1. Aluminum metal, Al (s)  \_\_\_\_element
	2. Methane gas, CH4 (g) \_\_\_\_compound
	3. Bromine liquid, Br2 (l) \_\_\_\_element
	4. Table salt, NaCl­ (s) \_\_\_\_compound
2. In this week’s experiment will you (3 points)
	1. take mass measurements? \_\_\_yes
	2. draw a graph? \_\_\_yes
	3. use the Bunsen burner? \_\_\_no
3. State three properties of a gas (3 points).

Answers may vary.

Able to flow

Variable shape

Variable volume

Very compressible

No-low attractive forces

Low density

High energy

Atoms/molecules are far apart and free to move anywhere within their container.

1. A sample of lead has a density of 11.34 g/mL at 25 °C (5 points).
	1. What is the temperature in Kelvin?

$$T\_{K}=T\_{C}+273.15=25+273.15=298.15 K≈298 K $$

* 1. Use dimensional analysis to calculate the volume occupied by 3.8871 grams of lead.

$3.8871 g Pb×\frac{1 mL Pb}{11.34 g Pb}=0.342777778 mL Pb≈0.3428 mL Pb$

1. Convert 254.3 mL to liters (3 points).

$$254.3 mL×\frac{1 L}{1000 mL}=0.2543 L$$

1. How long is the piece of wood in cm (2 points)? \_\_\_34.2 cm