Name: Date: Pd:

Fundamentals of Chemistry Review

Read the following paragraph. Then in the chart below, classify each of the underlined observations into the appropriate column, either quantitative or qualitative. There are a total of 10 observations.

A group of scientists were examining a rock from the planet Zarluke. They ran several tests on it and made many observations. First of all, they saw that the rock was deep purple in color. The mass of the rock was 17.24 grams. It was very hard. The rock was about 9 cm long. It was also had thirty-two tiny pits in it. The texture of the rock was very rough. It also had a really bad odor. It was definitely flammable because parts of it caught fire as one scientist accidentally placed the rock next to a heat source. The rock had a volume of 152 cm^3. Interestingly, the rock was always very hot. This Zarlukian rock sure was strange.

Qualitative Observations	Quantitative Observations
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.

What would happen to the density of a block of Tungsten (W) if you were to cut it in half?

Convert from standard notation to scientific notation or vice versa:

321 _____ 6.7×10^5 _____

1.2×10^{-1} _____ 0.119 _____

0.2713 _____ 8.1×10^{-4} _____

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Complete the following metric conversions and calculations: Show your work in a t chart/dimensional analysis or by multiplying fractions.

1000 mg = _____ g

65 g = _____ mg

160 cm = _____ mm

5.6 kg = _____ g

109 g = _____ kg

50 cm = _____ m

250 m = _____ km

6.3 cm = _____ mm

Compare using <, >, or =.

56 cm ◯ 6 m

7 g ◯ 698 mg

63 cm ◯ 6 m

Write the correct abbreviation for each metric unit:

Kilogram _____ Milliliter _____ Kilometer _____ Meter _____ Millimeter _____
Centimeter _____ Gram _____ Liter _____ Milligram _____

Perform the following calculations using dimensional analysis. Show your work in a T-chart or by multiplying fractions:

Convert 3598 grams into pounds.

A beaker contains 578 mL of water. What is the volume in quarts?

During a lab experiment, Susie collects 9.6 g of a chemical. According to her pre-lab calculations, the theoretical yield for this lab was 10.2g of that chemical.

- What is her % yield for this lab? Use the formula and show your work.

- What is the % error for her results? Use the formula and show your work.