Quiz 2A

1. A solution of cough syrup contains 7.50% active ingredient by volume. If the total volume of the bottle is 25.00 mL, how many milliliters of active ingredient are in the bottle (5 points)?

$25.00 mL bottle×\frac{7.50 mL active ingredient}{100 mL bottle}=1.875 mL active ingredient$

1. A thermometer containing 5.879 g of mercury has broken. What volume of mercury spilled? The density of mercury at 25 °C is 13.6 g/mL (5 points).

$$5.879 g Hg×\frac{1 mL}{13.6 g }=0.432279412 mL≈0.432 mL$$

1. Answer the following questions about the Density experiment (3 points):
	1. Density is a (physical/chemical) property of a substance.
	2. You will find the density of gold in this experiment. (True/False)
	3. Volumes in this experiment should be recorded to the nearest \_\_\_0.1\_\_\_ mL.
2. Classify each of the following as a homogenous mixture, heterogeneous mixture, element or compound (5 points):
	1. Copper metal, Cu \_\_\_\_\_\_\_\_\_element\_\_\_\_\_\_\_\_\_
	2. Soft Drink \_\_\_\_homogeneous mixture\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. Sugar, C12H22O11 \_\_\_\_\_\_\_\_compound\_\_\_\_\_\_\_\_\_\_
	4. Ham Sandwich \_\_\_\_\_\_\_heterogeneous mixture\_\_\_\_\_\_\_\_\_\_\_
	5. Baking Soda, NaHCO3 \_\_\_\_\_\_\_\_compound\_\_\_\_\_\_\_\_\_\_
3. Identify each of the following as properties of a solid, liquid or gas (2 points):
	1. This substance has a definite volume and \_\_\_\_\_\_solid\_\_\_\_\_\_

shape.

* 1. The particles in the substance have negligible attractive forces. \_\_\_\_gas\_\_\_\_\_\_\_\_

Quiz 2B

1. Answer the following questions about the Density experiment (3 points):
	1. You will find the density of iron in this experiment. (True/False)
	2. Density is a (physical/chemical) property of a substance.
	3. Volumes in this experiment should be recorded to the nearest \_\_\_0.1\_\_\_ mL.
2. Classify each of the following as a homogenous mixture, heterogeneous mixture, element or compound (5 points):
	1. Butane, C4H10 \_\_\_\_\_compound\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. Cranberry Juice \_\_\_\_\_\_\_\_homogeneous mixture\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. Platinum ring \_\_\_\_element\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	4. Battery \_\_\_\_\_\_heterogeneous mixture\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	5. Salt Substitute, KCl \_\_\_\_\_\_\_\_compound\_\_\_\_\_\_\_\_\_\_
3. A solution of cough syrup contains 5.25% active ingredient by volume. If the total volume of the bottle is 50. mL, how many milliliters of active ingredient are in the bottle (5 points)?

$50. mL bottle×\frac{5.25 mL active ingredient}{100 mL bottle}=2.625 mL=2.6 mL$

1. Identify each of the following as properties of a solid, liquid or gas (2 points):
	1. The particles in a substance are very far apart. \_\_\_\_gas\_\_\_\_\_\_\_\_
	2. This substance occupies the entire volume of the container. \_\_\_gas\_\_\_\_\_\_
2. A thermometer containing 9.821 g of mercury has broken. What volume of mercury spilled? The density of mercury at 25 °C is 13.6 g/mL (5 points).

$$9.821 g Hg×\frac{1 mL}{13.6 g }=0.722132353 mL≈0.722 mL$$