Quiz 2A

1. A solution of cough syrup contains 7.50% active ingredient by volume. If the total volume of the bottle is 30.0 mL, how many milliliters of active ingredient are in the bottle (5 points)?

$30.0 mL bottle×\frac{7.50 mL active ingredient}{100 mL bottle}=2.25 mL active ingredient$

1. A thermometer containing 6.1 g of mercury has broken. What volume of mercury spilled? The density of mercury at 25 °C is 13.6 g/mL (5 points).

$$6.1 g Hg×\frac{1 mL}{13.6 g }=0.448529412 mL≈0.45 mL$$

1. In the Density experiment, what are you finding the density of (3 points)?

Rubber stopper, metal slug, unknown liquid

1. Classify each of the following as a homogenous mixture, heterogeneous mixture, element or compound (5 points):
	1. Helium gas, He \_\_\_\_\_\_\_\_\_element\_\_\_\_\_\_\_\_\_
	2. Soft Drink \_\_\_\_homogeneous mixture\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. Sugar, C12H22O11 \_\_\_\_\_\_\_\_compound\_\_\_\_\_\_\_\_\_\_
	4. Cheese Sandwich \_\_\_\_\_\_\_heterogeneous mixture\_\_\_\_\_\_\_\_\_\_\_
	5. Baking Soda, NaHCO3 \_\_\_\_\_\_\_\_compound\_\_\_\_\_\_\_\_\_\_
2. Identify each of the following as properties of a solid, liquid or gas (2 points):
	1. This substance has a definite volume, \_\_\_\_\_\_liquid\_\_\_\_\_\_

but takes the shape of its container.

* 1. The particles in the substance have very strong attractive forces. \_\_\_\_solid\_\_\_\_\_\_\_\_

Quiz 2B

1. In the Density experiment, what are you finding the density of (3 points)?

Rubber stopper, metal slug, unknown liquid

1. Classify each of the following as a homogenous mixture, heterogeneous mixture, element or compound (5 points):
	1. Propane, C3H8 \_\_\_\_\_compound\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. Cranberry Juice \_\_\_\_\_\_\_\_homogeneous mixture\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. Silver spoon \_\_\_\_element\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	4. Remote Control \_\_\_\_\_\_heterogeneous mixture\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	5. Salt Substitute, KCl \_\_\_\_\_\_\_\_compound\_\_\_\_\_\_\_\_\_\_
2. A solution of cough syrup contains 5.25% active ingredient by volume. If the total volume of the bottle is 25.0 mL, how many milliliters of active ingredient are in the bottle (5 points)?

$25.0 mL bottle×\frac{5.25 mL active ingredient}{100 mL bottle}=1.31 mL$

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

$$7.5 g Hg×\frac{1 mL}{13.6 g }=0.551470588 mL≈0.55 mL$$