Section 1B Revie	ew:
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Name: _____

FeF ₂	Iron (II) fluoride	Cu ₃ (PO ₄) ₂	copper (II) phosphate	
SnO_2	Tin (IV) oxide	Al(OH) ₃	aluminum hydroxide	
CaCl ₂	Calcium chloride	(NH4)3PO4	ammonium phosphate	
$Li_2Cr_2O_7$	Lithium dichromate	Nb(SCN)5	niobium (V) thiocyanate	
CaO	Calcium oxide	NaF	sodium fluoride	
Fe ₂ (SO ₃) ₃	Iron (III) sulfite	Sr_3P_2	strontium phosphide	
Fe_2S_3	Iron (III) sulfide	KCN	potassium cyanide	

Part 2: Define each of the following and give an example of each.

Part 1. Fill in the blanks for the following ionic compounds.

1) Element a substance that contains only one kind of atom (He, diamond, aluminum foil)

2) Compound a substance made up of 2 or more elements bonded together (salt, sugar, water)

3) Solution – a mixture of 2 or more substances in a single physical state. The mixture is homogeneous (salt water, air, steel, Kool-aid)

4) Colloid – a heterogeneous mixture that has two or more visibly different parts that stay mixed up with one another (sand, conrete, Yoplait yogurt)

5) Suspension – a heterogeneous mixture that has two or more visibly different parts that settle out (oil & water, orange juice, Italian dressing)

Part 3: Rewrite the following equations:

1) Aqueous sodium carbonate reacts with solid copper to produce solid copper (II) carbonate and two solid sodium atoms.

 Na_2CO_3 (aq) + Cu (s) --> CuCO_3 (s) + 2 Na (s)

2) $CaCO_3$ (s) + H_2SO_4 (aq) ---> $CaSO_4$ (aq) + H_2O (l) + CO_2 (g)

Solid calcium carbonate reacts with aqueous hydrogen sulfate to produce aqueous calcium sulfate, liquid water and carbon dioxide gas.

Part 4: Calculate the unknown value in each of the following.

1) mass = 3.4 g, volume = 12.2 mL, density = 0.28 g/mL

2) density = 0.2 g/mL, volume = 3 cm^3 , mass = 0.60 g

3) 25 mL, 4.2 g = 0.17 g/mL

4) 11.3 g, 2.7 g/mL = 4.2 mL

5) sphere radius 4.57 cm, 0.34 mg = 0.85 mg/L or 8.5 x 10-7 g/mL

6) 4.23 g/mL, cylinder with r = 2.47 cm and h= 7.00 cm = 567 g

Part 5: Draw models for each of the following descriptors: 1) A mixture of two gases, both elements. 4) A



2) A suspension mixture of a compound and an element.



3) A homogeneous gas mixture of 4 different compounds.



4) A liquid solution in which the substance XY is the solute and W_2Z is the solvent.



5) A gas solution of a four atom molecule and a three atom molecule.



6) Describe the difference between a chemical change and a physical change. Include an example of each.

In a physical change, the material remains the same material. Examples are crushing, cutting and dissolving. Chemical changes occur when the material changes into a new substance, like in burning or when a new state is produced.