Unit 3 Physical science Problems I

**Solubility problems**

1. **If 5 g of solute was used in 7.5 g of solvent, what is the solubility?**
2. **If 150 g of solvent was used to dissolve 15 g of solute, what is the solubility?**
3. **If a solution had a solubility of 25.07 g/g and 15 g of solvent, how much solute was dissolved?**
4. **If 10 g of solvent was used to dissolve 4 g of solute, that is the solubility?**

Balance

**1.) Na + O2 🡪 Na2O**

**2.) KCl + MgO 🡪 MgCl2 + K2O**

**3.) Al2S3 + CaF2 🡪 CaS + AlF3**

**4.) NaCL + O2 🡪 Na2O + Cl2**

**5.) H2  + O2 🡪 H2O**

**6.) GaBr3 + K 🡪 KBr + Ga**

**7.) Fe2Te3 + I 🡪 FeI3 + Te**

**8.) SrI + In2O3 🡪 InI3 + Sr2O**

**% Composition**

**1.) % Comp. Of Li in LiF?**

**2.) % comp. Of O in CO?**

**3.) % comp. Of Mg in Mg(NO3)2?**

**4.) % comp. Of Na in sodium oxide?**

**Density**

1. **If an object had a volume of 30 ml and a mass of 78 g, what would the density be?**
2. **If an object had a density of 10.78 g/ml and a mass of 45 g, what is the volume?**
3. **If an object had a density of 50.36 g/ml and a volume of 22 ml, what is the mass?**