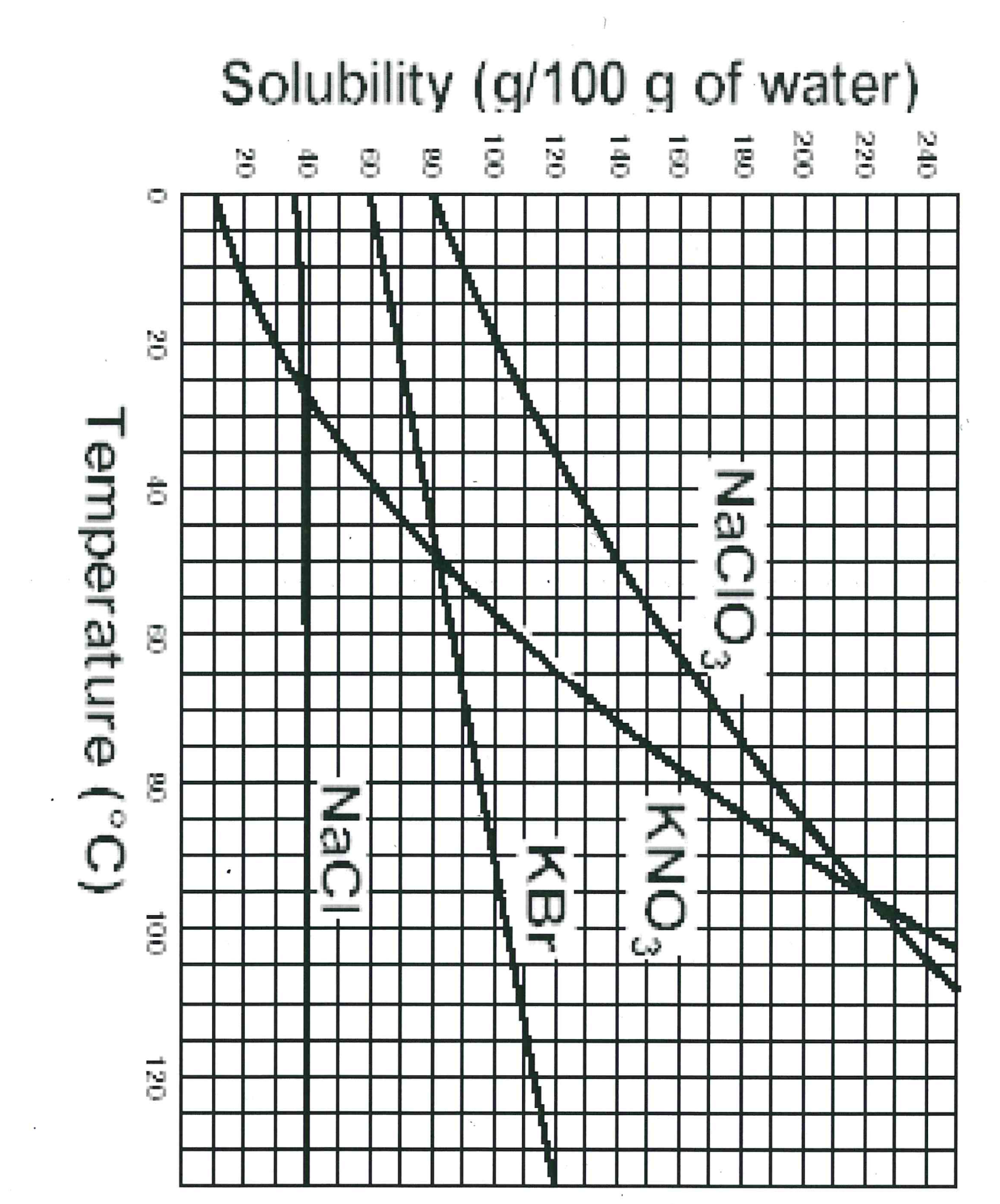
**Section i – Vocabulary**

1. \_\_\_\_\_\_\_ Substance made up of atoms that all of the same number of protons
2. \_\_\_\_\_\_\_ Substance made up of 2 or more elements that are chemically combined
3. \_\_\_\_\_\_\_ Substance made up of 2 or more elements that are not chemically combined
4. \_\_\_\_\_\_\_ Unevenly distributed mixture
5. \_\_\_\_\_\_\_ Mixture with contents spread evenly throughout
6. \_\_\_\_\_\_\_ The name given to electrons found in the outermost shell of an atom
7. \_\_\_\_\_\_\_ The force that holds elements together in a compound
8. \_\_\_\_\_\_\_ Process that involves the breaking and/or forming of bonds
9. \_\_\_\_\_\_\_ Reaction where electrons get transferred between elements
10. \_\_\_\_\_\_\_ Reaction where different elements share electrons
11. \_\_\_\_\_\_\_ Covalent bonds usually form between 2 \_\_\_\_\_\_\_\_\_\_\_\_
12. \_\_\_\_\_\_\_ Ionic bonds usually form between a metal and a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
13. \_\_\_\_\_\_\_ Occurs when a covalent bond forms but the electron isn’t shared equally
14. \_\_\_\_\_\_\_ In a covalent bond, when the electron is shared equally
15. \_\_\_\_\_\_\_ An atom’s affinity for an electron
16. \_\_\_\_\_\_\_ The numerical prefix for the number 7
17. \_\_\_\_\_\_\_ The numerical prefix for the number 9
18. \_\_\_\_\_\_\_ The simplest version of a chemical formula
19. \_\_\_\_\_\_\_ Substances formed by a chemical reaction
20. \_\_\_\_\_\_\_ 2 or more substances combined to from a chemical compound
21. \_\_\_\_\_\_\_ Reaction that produces oxygen and heat
22. \_\_\_\_\_\_\_ A mixture that settles over time
23. \_\_\_\_\_\_\_ Part of the solution that gets dissolved
24. \_\_\_\_\_\_\_ Part of the solution that does the dissolving

25. \_\_\_\_\_\_\_ Determines acidity or basicity by testing the concentration of hydronium ionsA. Chemical reaction

1. Product
2. Metal(s)
3. Mixture
4. Element
5. Electronegativity
6. Solvent
7. Combustion
8. Homogeneous
9. pH
10. Compound
11. Covalent
12. Heterogeneous
13. Nonpolar
14. Chemical bond
15. Solute
16. Nona
17. Valence
18. Synthesis
19. Hepta
20. Nonmetal(s)
21. Empirical
22. Ionic
23. Polar
24. Suspension

**Section ii – Matching**

1. \_\_\_\_\_\_\_ 3NaBr + 1H3PO4 🡪 1Na3PO4 + 3HBr
2. \_\_\_\_\_\_\_ 2PbSO4 🡪 2PbSO3 + 1O2
3. \_\_\_\_\_\_\_ 1C2H4 + 3O2 🡪 2CO2 + 2H2O
4. \_\_\_\_\_\_\_ 3Mg + 1Fe2O3 🡪 2Fe + 3MgO
5. \_\_\_\_\_\_\_ S8­ + 8O2 🡪 8SO2
6. Synthesis
7. Decomposition
8. Combustion
9. ****Single replacement
10. Double replacement

**Section iii – Interpreting graphs (use graph to the right)**

1. What compound is most soluble at 40°C? \_\_\_\_\_\_\_
2. What substance is most soluble at 100°C? \_\_\_\_\_\_\_
3. Which substance solubility is affected the least by temperature change? \_\_\_\_\_\_\_
4. What is the solubility of KBr at 70°C? \_\_\_\_\_\_\_
5. At 65°C with 120g of KNO3, the solution is said to be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Section iv – Identification: identify each of the following as ionic, covalent, polyatomic, or metallic.**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ NH4+
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Cu²⁺
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ NaCl
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CH3COOH
5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (PO4)3-

**Section v – Balancing equations**

1. \_\_\_\_\_\_ P4 + \_\_\_\_\_\_ Br2 🡪 \_\_\_\_\_\_ PBr3
2. \_\_\_\_\_\_ Li3PO4 + \_\_\_\_\_\_ NaBr 🡪 \_\_\_\_\_\_ Na3PO4 + \_\_\_\_\_\_ LiBr
3. \_\_\_\_\_\_ HBr + \_\_\_\_\_\_ Mg(OH)2 🡪 \_\_\_\_\_\_ MgBr2 + \_\_\_\_\_\_ H2O
4. \_\_\_\_\_\_ AgNO3 + \_\_\_\_\_\_ Li 🡪 \_\_\_\_\_\_ LiNO3 + \_\_\_\_\_\_ Ag
5. \_\_\_\_\_\_ AlBr3 + \_\_\_\_\_\_ K 🡪 \_\_\_\_\_\_ KBr + \_\_\_\_\_\_ Al

**Section v –Naming: name the following compounds *and* indicate whether they are covalent or ionic (circle one).**

1. Al(OH)3 ionic covalent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. BaF2 ionic covalent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. MgBr2 ionic covalent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. N2O3 ionic covalent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. PF3 ionic covalent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. PbO ionic covalent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Fe2O3 ionic covalent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. NaCl ionic covalent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. Cu2O ionic covalent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. P4S5 ionic covalent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Section vi –Short answer**

1. In your own words, define the term concentration.
2. In your own words, define the term solubility and **explain** how we can represent this information graphically.
3. **Explain** what properties make a solution a “strong” acid or base. What happens to these compounds when they are placed in water? Why is this information important?
4. In the boxes provided, draw an example of a compound, homogeneous and heterogeneous mixture at the molecular level.
5. **Explain** the reaction that occurs to form NaCl, commonly known as table salt. Include step-by-step description of each step.