**Oxford High School**

**Chemistry**

**Chapter 1-17 Cumulative Review**

1. The equation for the dissolving of silver acetate, AgC2H3O2 is

AgC2H3O2 (s) ↔ Ag+(aq) + C2H3O2-(aq)

A saturated solution of silver acetate contains 2 x10-3 moles of silver ion in one liter of water. What is the Ksp for this salt?

1. In the equilibrium reaction AgCl(s) + 2NH3(aq) ↔ Ag(NH3)2+(aq) + Cl-(aq), an increase in the concentration of chloride ion will
2. Cause AgCl to decompose
3. Cause Ag(NH3)2+ to form
4. Cause AgCl to precipitate
5. Cause NH3 to decrease
6. Diagram the following reaction using spheres to represent each atom. Be sure to represent atomic size correctly.

2Na + Cl2 → 2NaCl

1. Draw the Lewis structures for the following molecules
2. CO2
3. NO3-
4. What is the molecular shape of CO2?
5. What is the molecular shape of NO3-?
6. Define limiting reactant and relate it to the extent that a reaction will proceed.
7. If 10.0 g of Fe and 10.0 g of S are heated together, how many gram s of iron (II) sulfide could be formed? Fe + S → FeS
8. How many grams of calcium carbonate would be needed to produce 44.8L of carbon dioxide gas at STP? CaCO3 + 2HCl → CaCl2 + H20 + CO2
9. How many moles of water are formed when one mole of butane is burned?

2C4H10 + 13O2 → 8CO2 + 10H2O

1. Complete, balance, and identify the following reactions:
2. Mg + O2 →
3. KI →
4. Cu + AgNO3 →
5. Na2CO3 + CaCl2 →
6. C3H8 + O2 →
7. What pressure will 3.8L of a gas at 298K have if the same gas at 1.5 atm and 323K occupies 2.0L?
8. What volume will 7.8 mol of a gas occupy at 298K and 3.0 atm?
9. A container has only two gases. The total pressure of the system is 937 mmHg and the partial pressure of one of the gases is 725 mmHg. What is the pressure of the second gas?
10. A sample of gas at 1.00 atm of pressure occupies a volume of 500L. If the volume is decrease to 125L at constant temperature, what is the new pressure?