**Oxford High School**

**Chemistry**

**Chapter 1-13 Cumulative Review**

1. A 2.00 L flask at 27oC contains 4.40 g of carbon dioxide and 2.00 g of nitrogen gas.
2. What is the pressure in atmospheres of carbon dioxide?
3. What is the pressure in atmospheres of nitrogen gas?
4. If a gas sample at 25oC occupies a volume of 2.93L, what will the volume be at 500oC if the pressure is constant?
5. Complete and balance the following equation:

C3H8(g) + O2(g) →

1. What type of equation is this?
2. How many total atoms are in the propane used in this equation?
3. Carbon dioxide turns limewater cloudy. When solid copper (II) carbonate is heated, the gas bubbled into a limewater causes the solution to turn white and a black powder remains in the tube.
4. Write a complete, balanced equation including states of matter.
5. What type of equation is this?
6. A chemistry student is given a mixture contain sand, salt, and water.
7. What type of mixture is this?
8. Describe a process to separate these three components.
9. List the number of protons, neutrons, and electrons in the following isotopes and ions
10. 24 B. 35 C. 3

Mg2+ Cl- H

12 17 1

1. Identify the following equations as showing ionization energy (ie) or electron affinity (ea).
2. Na → Na+ + 1e-
3. Mg → Mg2+ + 2e-
4. Cl + 1e- → Cl-
5. Al → Al3+ + 3e-
6. O + 2e- → O2-
7. Describe the difference between these three isotopes of hydrogen in terms of number of particles:

Hydrogen-1

Hydrogen-2

Hydrogen-3

1. Answer the following questions in terms of bonding
2. Where are the most reactive metals found on the periodic table?
3. Why are these metals considered most reactive?
4. Where are the most reactive nonmetals found on the periodic table?
5. Why are these nonmetals considered reactive?