Final Review

- Periodic Table
- Types of Bonds
- Equations and Reactions
- Mole
- Organic

PT

1. Group 17 is known as _____. Each element in this group has _____ valence electrons.
2. The _____ ____ are unreactive because they already have a full _____.
3. Atomic radius _____ as you go down a group and _____ as you go across a period
4. Metals are located on the _____ of the PT, while nonmetals are located on the _____.

Types of Bonding

1. What rule explains why ions form?

2. Metals typically have a _____ charge while nonmetals typically have a _____ charge

3. Write the ionic formula for Calcium Hydroxide

4. An ionic bond occurs between _____, while a covalent bond occurs between _____.

Reactions and Equations

1. Write a balanced equation for the reaction between Calcium Hydroxide and Sodium Sulfate.

2. What type of reaction is described in question 1.

3. A combustion reaction always produces: _____

Mole

1. Calculate the molar mass of methane
2. If you have 2.4g of methane, how many moles are present?
3. If you have 2.4g of methane, how many molecules are present?
4. If you have 4.58×10^{26} apples, how many moles of apples do you have.

Organic

1. Name a 7 chain hydrocarbon that has a double bond between the second and third carbon.
2. Draw the above molecule using structural formula, condensed formula, and shorthand
3. What functional group contains a nitrogen AND a carbon that is double bonded to an oxygen?
4. What functional group is represented by ‘COOH?
5. What functional group is represented by ‘CO_2R?
6. What is the relationship between a monomer and a polymer?
7. Identify and draw all generic forms of functional groups involved in a condensation reaction. Label each as either a reactant or a product.