Name: _____ **Date:** _____

Chemistry *~ Ms. Hart* **Class:** Anions or Cations

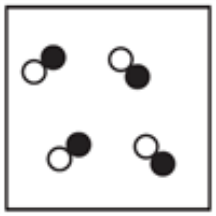
THE URBAN ASSEMBLY SCHOOL FOR CRIMINAL JUSTICE

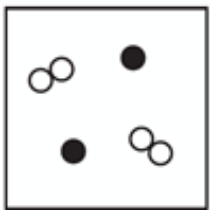
3.1 Elements and Compounds

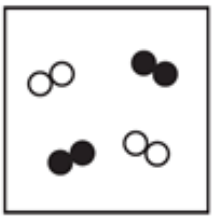
Directions: Use the periodic table to help you determine whether the following pure substances are elements or compounds. Remember elements are made up of only 1 type of atom while compounds are made up of more than 1 type of atom.

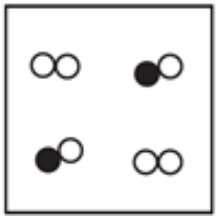
Substance	Element or Compound	Number and type of atoms present
Iron (Fe)	Element	1 Fe atom
Oxygen (O_2)	Element (diatomic)	2 O atoms
Carbon dioxide (CO_2)	Compound	1 C atom, 2 O atoms
Water (H_2O)		
Glucose (sugar) ($C_{12}H_{22}O_{11}$)		
Aluminum (Al)		
Sodium (Na)		
Nitrogen (N_2)		
Sulfuric Acid (H_2SO_4)		
Ammonium Nitrate (NH_4NO_3)		
Ammonium Phosphate [$(NH_4)_3PO_4$]		

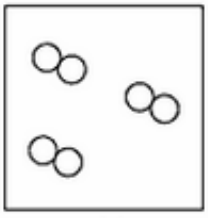
Question 1: Which particle diagram represents a mixture of an element and a compound?

a. 

b. 

c. 

d. 

e. 

Use the pictures from Question 1 and the box below to answer questions 2-5. More than one answer may be correct.

2. Which of the following shows only one pure substance?

3. Which of the following is a mixture of one element and one compound?

4. Which of the following are mixtures?

5. Which of the following is a mixture of two elements?