

## Unit 2 – Ch 4.3 – Distinguishing Between Atoms

### How Are Elements Different?

- Different \_\_\_\_\_
  - **ALWAYS** indicates the number of \_\_\_\_\_.
  - Uniquely \_\_\_\_\_ an element.
  - \_\_\_\_\_ Atoms = **ALWAYS** the same number of \_\_\_\_\_.
  - Ex #1: \_\_\_\_\_ Ex #2: \_\_\_\_\_

### IONS (Not Neutral):

- **DEFINITION:**
  - Number of \_\_\_\_\_ will \_\_\_\_\_ change.
  - Charge on atom depends \_\_\_\_\_.
- **CATIONS (+):**
  - Ex #1: \_\_\_\_\_ Ex #2: \_\_\_\_\_
- **ANIONS (-):**
  - Ex #1: \_\_\_\_\_ Ex #2: \_\_\_\_\_

### MASS NUMBER (X):

- **DEFINITION:**
  - **NOT** exactly the same value as \_\_\_\_\_.
    - **Atomic Mass** = \_\_\_\_\_ of \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ in one atom.
  - **MASS NUMBER** = \_\_\_\_\_

## NUCLIDES...Expression of an Atom:

- Represented in 3 ways:

- #1:

- #2:

- #3:

### PRACTICE:

Ex #1: How many neutrons are present in potassium-39?

Ex #2: What is the mass # of nitrogen with 7 neutrons?

Ex #3: What is the mass # in a calcium cation? # neutrons?

- Atoms of the \_\_\_\_\_ element \_\_\_\_\_ have the same number of \_\_\_\_\_.
  - BUT may differ in \_\_\_\_\_ and \_\_\_\_\_.