**Unit 1 Study Guide**

*Identify the following as chemical or physical changes:*

Irreversible Water Evaporating Gas being produced

Ripping Paper Reversible New substance formed

Burning lighter fluid Squeezing an orange Unchanged

*Identify the following mixtures as heterogeneous or homogeneous:*

Apple Juice Bronze Oil and Water

Lucky Charms Gatorade Italian Dressing

*Identify the following pure substances as Elements or Compounds:*

C CO Os Fe

LiOH CaCl2 NO Br2

*Complete the chart below:*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Location** | **Charge** | **Mass** | **Other important info** |
| **Proton** |  |  |  |  |
| **Electron** |  |  |  |  |
| **Neutron** |  |  |  |  |

***Define the following:***

Matter –

Element-

Compound-

Solid-

Liquid-

Gas-

Pure Substance-

Mixture-

Heterogeneous Mixture-

Homogeneous Mixture-

Atomic Number-

Mass Number-

Isotope-

Ion-

How do you calculate the number of neutrons in an atom?

An atom has 5 protons, 5 electrons, and 3 neutrons:

* 1. What is the atomic number?
  2. What is the mass of the atom?

*Complete the chart below:*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Element** | **Atomic number** | **# Protons** | **# Electrons** | **# Neutrons** | **Mass #** | **Hyphen notation** | **Nuclear symbol** |
| Lead |  |  |  |  | 204 |  |  |
| Platinum |  |  |  | 114 |  |  |  |
| Cesium |  |  |  |  | 130 |  |  |
| Bromine |  |  |  | 46 |  |  |  |