

Protons:

Electrons:

Neutrons:

Orbital/Shell:



Atomic Number:

Atomic Mass Number:

Finding Neutrons (isotope) example:





**Isotope:**

**Decay:**



***(Isotope Notation of Carbon-14)***

List all information you

Know from this notation:

 

An Element is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_0, 0-0 or 0-0-0…

A Molecule is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_0-0 or 0 – X

A Compound is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 0 - X





Memorize the names and atomic numbers of the first 12 elements below, and the top two most common elements in the earth’s crust from the graph!

*Elements in the Earth’s Crust*

 

SOLUTIONS are:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Which **DO / DO NOT** involve chemical changes.

 Solute:

 Solvent:

In Geology, the mineral \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ has formed giant crystals underground in Mexico.

 

A solution of the rock Limestone can create \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ when it drips slowly from the roofs of caves.



MIXTURES are:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Which **DO / DO NOT** involve chemical changes.

Homogeneous:

 Heterogeneous:

Conglomerate = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mixture (large, course, visible grains)

Sandstone = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mixture (small, non-visible grains)

***What can the following elements do to the appearance of rocks and minerals?***

Potassium: Manganese: Iron: Calcium:

Turns pink/orange

***WHY do atoms bond with each other?***

***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

THE REASON **IONIC BONDS** ARE FOUND IN GEOLOGY:

1)

2)

3)

THE REASON **METALLIC BONDS** ARE FOUND IN GEOLOGY:

1)

2)

3)



**WAYS TO CONVERT BETWEEN ANY TWO PHASES OF MATTER:**

Condensation:

Evaporation:

Sublimation:

Freeze:

Changes can occur to matter by adding or taking away \_\_\_\_\_\_\_\_\_\_\_.