Periodic Table Review

Essential Vocabulary:

Atom

Element

Atomic number

Atomic Mass

Proton

Neutron

Electron

Period

Group

Valence Electron

Properties

Reading the elements: Label with atomic number, atomic mass, symbol, name



Number of protons:

(Same as atomic number)

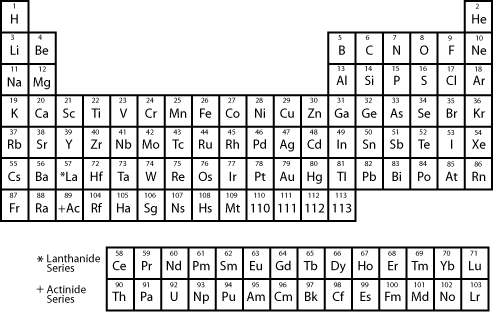
Number of neutrons:

(Rounded atomic mass – atomic number)

Number of electrons:

(Same as atomic number)

Periods and Groups: label the Periods and Groups



Alkali Metals:

* Alkali Metals are located in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at the far left side of the periodic table. Note that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is not an alkali metal. All of the Alkali metals have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in their outer shell. This is what gives them similar \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Alkali metals are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and are not found in their \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in nature. They are also all \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at room temperature. There are 6 Alkali Metals with symbols of \_\_\_\_\_\_, \_\_\_\_\_\_, \_\_\_\_\_\_, \_\_\_\_\_\_, \_\_\_\_\_\_, and \_\_\_\_\_\_

Alkaline Earth Metals:

* The Alkaline Earth Metals are located in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, just to the right of the Alkali Metals. All of the Alkaline Earth Metals have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in their outer shells. Alkaline Earth Metals are still \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ but not as reactive as the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. These are sometimes found in their pure form in nature as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. There are 6 Alkaline Earth Metals with symbols of \_\_\_\_\_\_, \_\_\_\_\_\_\_, \_\_\_\_\_\_\_, \_\_\_\_\_\_, \_\_\_\_\_\_, and \_\_\_\_\_\_\_

Transition Metals

* The Transition Metals are located in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the Periodic Table from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for the Transition Metals \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, but stays the same for each \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Transition Metals are all \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at room temperature except for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. They are good \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of heat and electricity, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, shiny, and are \_\_\_\_\_\_\_\_ very reactive. They still \_\_\_\_\_\_\_\_\_\_\_\_ with other elements but \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as the Halogens, Alkali Metals, or Alkaline Earth Metals. These metals are what we \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ as metals in our daily lives. There are many Transition Metals but some examples are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Halogens

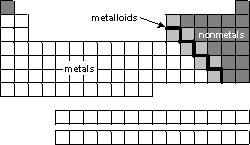
* The Halogens are located in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the 2nd to the last column on the right. All of the Halogens have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ so they just need 1 electron to fill their outer shell. Halogens are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and usually react with the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. This is because the Alkali Metals need to \_\_\_\_\_\_\_\_ 1 electron and the Halogens need to \_\_\_\_\_\_\_\_ 1 electron. The halogens are all \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and are usually gases at room temperature. There are 5 Halogens with the element symbols \_\_\_\_\_\_, \_\_\_\_\_\_, \_\_\_\_\_\_, \_\_\_\_\_\_, and \_\_\_\_\_\_

Noble Gases

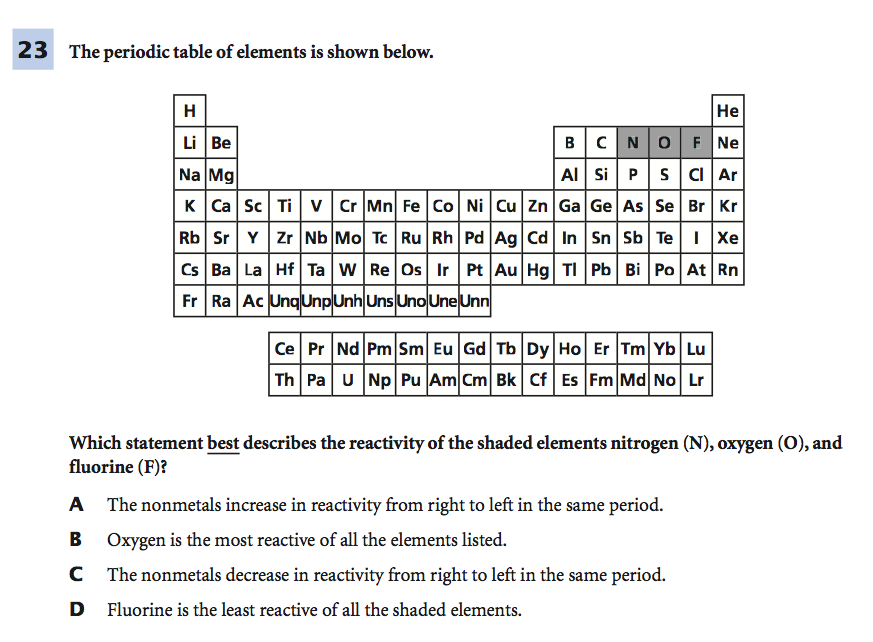
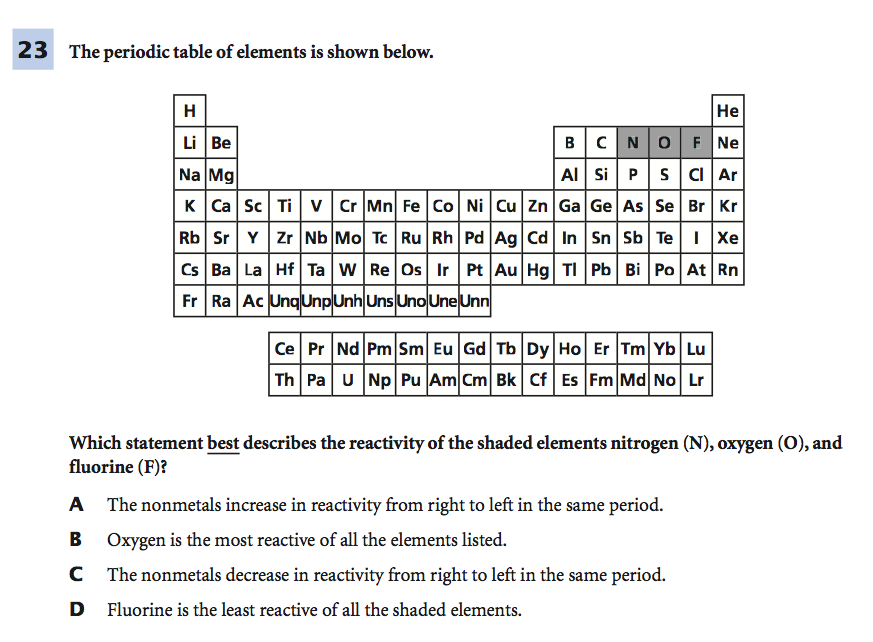
* The Noble Gases are located all the way to the right of the table in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The Noble Gases are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ because they are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The Noble Gases have \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in their outer shell and don’t need to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ any electrons. The Noble Gases are all \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and are commonly found in their \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the atmosphere. There are 6 Noble Gases with symbols \_\_\_\_\_\_, \_\_\_\_\_\_, \_\_\_\_\_\_, \_\_\_\_\_\_, \_\_\_\_\_\_, and \_\_\_\_\_\_.

Metals, Nonmetals, and Metalloids – General properties

|  |  |  |
| --- | --- | --- |
| Metals | Nonmetals | Metalloids |
|  |  |  |



Sample TCAP Questions

1. What is the atomic number of Fluorine (image on right)?
2. Which statement best describes the reactivity of the shaded elements nitrogen (N), oxygen (O), and fluorine (F)?
3. Which element from period 2 has the lowest atomic mass (use your periodic table from the notes)
   1. Li
   2. Be
   3. Ca
   4. Ne
4. Based on their locations on the Periodic table, which two elements share the most similar chemical properties?
   1. K and Kr
   2. Be and Ba
   3. S and Sn
   4. H and I
5. Based on its position on the periodic table, which element is the heaviest
   1. Helium (He)
   2. Neon (Ne)
   3. Argon (Ar)
   4. Krypton (Kr)
6. A property that the elements Fe, Co, and Ni have in common is that they are all
   1. Chemically inert
   2. Halogens
   3. Transition Metals
   4. Poor Electrical Conductors