

Guided Notes: Ch.5

Name: _____

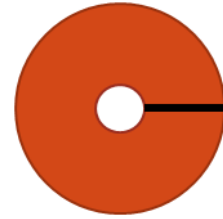
Periodic Trends

Date: _____

Period: _____

MEASURING ATOMIC RADIUS

☼ Ideally we would measure the radius from _____
to _____
of the atoms _____
(valence orbital)

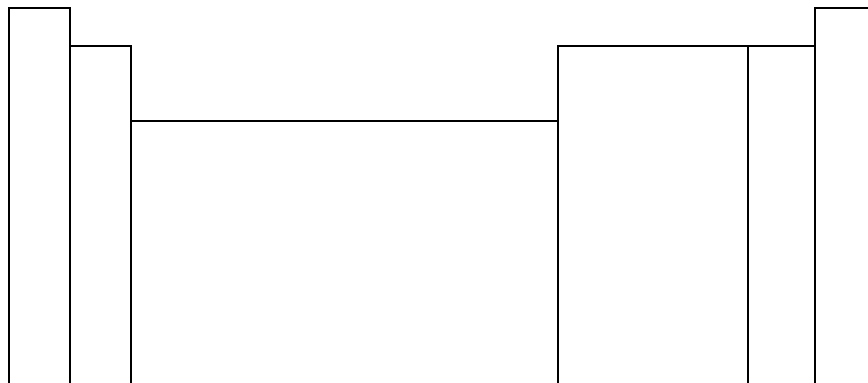


☼ We can't do that because the orbitals are just _____
The edge is "_____."

- So we measure half the distance between _____

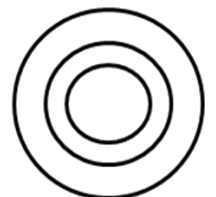
TREND IN ATOMIC RADIUS

☼ _____ from RIGHT to LEFT, TOP to BOTTOM



WHY DOES ATOMIC RADIUS INCREASE THE WAY IT DOES?

☼ As you go DOWN a group you are adding more _____
_____ and therefore more _____
As you add energy levels your radius _____



☀ As you go ACROSS a period from LEFT to RIGHT you add more

SO WHY DOESN'T YOUR RADIUS GET BIGGER????

The more _____ you add, the more they can

_____ The _____

of the nucleus pulls the _____ electrons inward –

making the radius _____

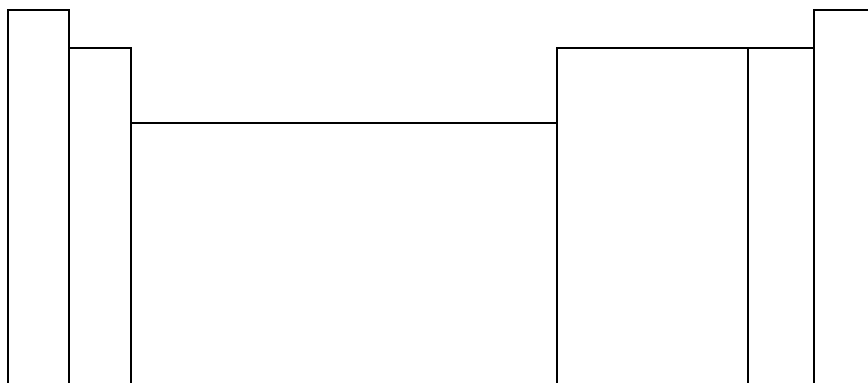
ELECTRONEGATIVITY

Official Definition of Electronegativity:

A measure of the ability of an atom in a chemical compound to attract electrons from another atom in the compound.

What that REALLY means:

TREND IN ELECTRONEGATIVITY



WHY DOES ELECTRONEGATIVITY INCREASE THE WAY IT DOES?

☀ Increases left to right because: *atoms are closer to*

☀ Decreases top to bottom because: *the further away the electrons are from the nucleus* _____

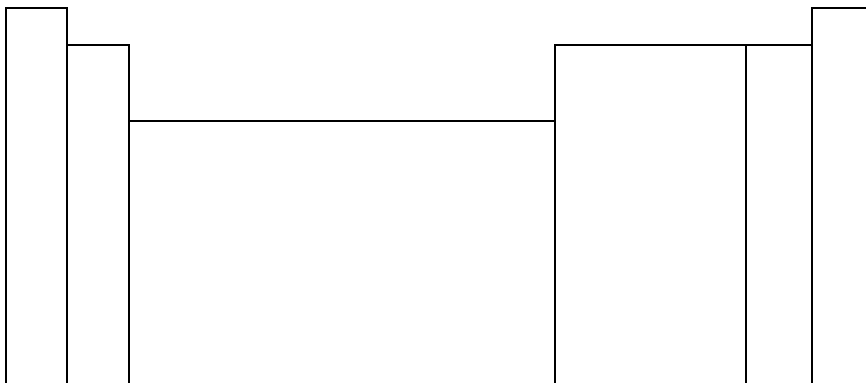
IONIZATION ENERGY

Official Definition of Ionization Energy:

The energy required to remove one electron from a neutral atom of an element

What that REALLY means:

TREND IN IONIZATION ENERGY



WHY DOES IONIZATION ENERGY INCREASE THE WAY IT DOES?

☀ Increases left to right because: atoms want to have _____
_____ so they do not want to _____
_____ their electrons

☀ Decreases top to bottom because: electrons are _____
_____ so there is not as much _____
between the nucleus and electrons. They can be pried loose more easily.