

## Electron Configurations

Co:

The superscript represents the number of **electrons** in that energy level and orbital.  
Add up all the subscripts and you can identify the atom

Practice:

Mg

$$p+ \underline{\quad\quad} = e- \underline{\quad\quad}$$

Ni

$$p+ \underline{\quad\quad} = e- \underline{\quad\quad}$$

Li

$$p+ \underline{\quad\quad} = e- \underline{\quad\quad}$$

Atoms:                      equals                     

P

$$p+ \underline{\quad\quad} = e- \underline{\quad\quad}$$

Ions:                      do NOT equal                     

$p^{-3}$

$$p+ \underline{\quad\quad} \text{ and } e- \underline{\quad\quad}$$

Add up the electrons...what neutral atom has that many electrons?

**\*\*Ions have the same electron configuration as noble gases (group 18) \*\***

Isoelectronic:

Ex. Argon is isoelectronic with a phosphide ion ( $P^{3-}$ )

Practice:

$Cl^{-}$

$$p+ \underline{\quad\quad} \text{ and } e- \underline{\quad\quad}$$

isoelectronic -

$N^{3-}$

$$p+ \underline{\quad\quad} \text{ and } e- \underline{\quad\quad}$$

isoelectronic-

$\text{Al}^{3+}$ 

p+ \_\_\_\_\_ and e- \_\_\_\_\_

isoelectronic -

Writing electron configurations still takes some time....

Al

Ne

Shorthand (Noble Gas) configuration:

IT MUST ALWAYS BE A NOBLE GAS (GROUP 18) IN BRACKETS:

Ca

p+ \_\_\_\_\_ = e- \_\_\_\_\_

As

p+ \_\_\_\_\_ = e- \_\_\_\_\_

Cd

p+ \_\_\_\_\_ and e- \_\_\_\_\_