

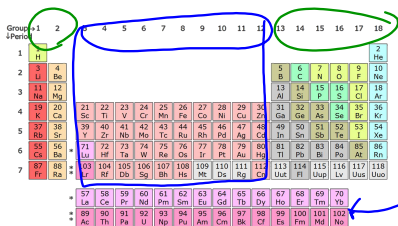
Review

What elements are the main group elements?

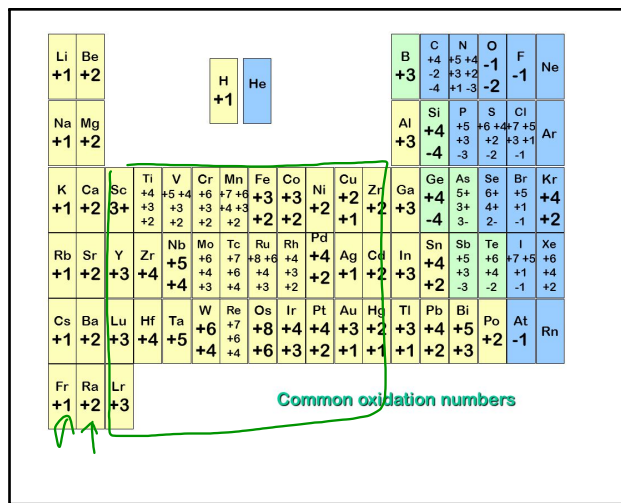
1, 2, 13-18

What groups make up the transition metals?

3-12



Oct 7-10:58 AM



Oct 7-2:56 PM

Main Group vs. Transition Elements

-- main group elements always have the same charge for their ions

ex: Mg^{+2} , F^{-}

-- transition metals can have multiple charges for their ions -- multivalent

ex: Cu^{+} , Cu^{+2}

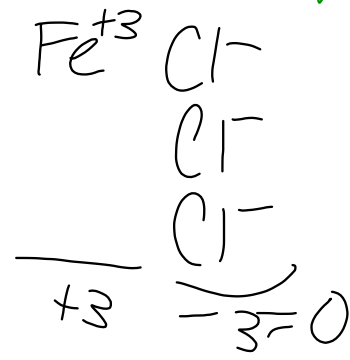
Oct 7-11:08 AM

Is this Fe^{+2} or Fe^{+3} ?

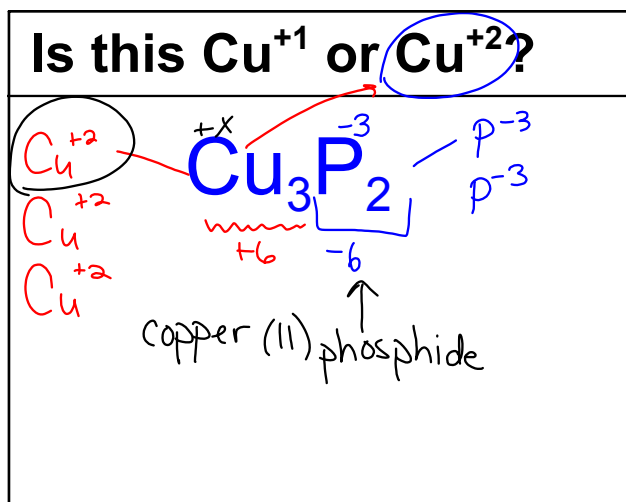


iron (III) chloride

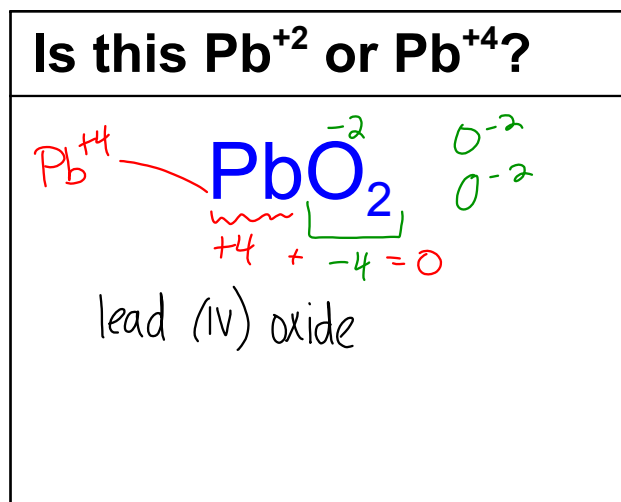
**all compounds are neutral 0 charge*



Oct 10-9:58 AM



Oct 10-9:58 AM



Oct 10-9:58 AM

Naming with Transition Metals

- cation name stays the same
- anion ending changes to --ide
- use Roman Numerals to communicate the charge of the transition metal

ex: copper (I) chloride, copper (II) chloride

Oct 7-2:30 PM

Roman Numerals

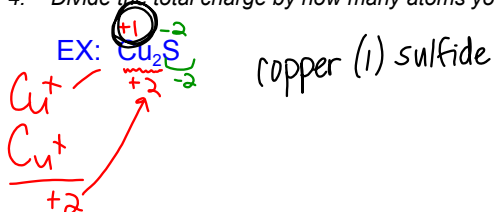
Number	Roman Numeral
1	I
2	II
3	III
4	IV
5	V
6	VI

Oct 11-1:00 PM

Naming with Transition Metals

Steps to Name Ionic Compounds with Transition Metals:

1. Identify the charge of the anion
2. Determine the total charge from the anion (*charge of the individual atom x how many you have*)
3. Determine the total charge needed from the cation.
4. Divide the total charge by how many atoms you have.



Oct 7-2:30 PM

THINGS TO REMEMBER

- Zinc is **ALWAYS** a +2
- Silver is **ALWAYS** a +1
- You don't need to use roman numerals for these
- Sn : Pb need Roman numerals

Oct 7-2:58 PM

Practice:

Name the following compounds:

1. $\overset{+2}{\text{Ni}}\overset{-2}{\text{S}}$ nickel (II) sulfide
2. $\overset{+2}{\text{Cu}}\overset{-1}{\text{Cl}}_2$ copper (II) chloride
3. $\overset{+2}{\text{Fe}}_3\overset{-3}{\text{N}}_2$ iron (II) nitride
4. $\overset{+4}{\text{Pb}}\overset{-2}{\text{S}}_2$ lead (IV) sulfide

Oct 7-2:41 PM