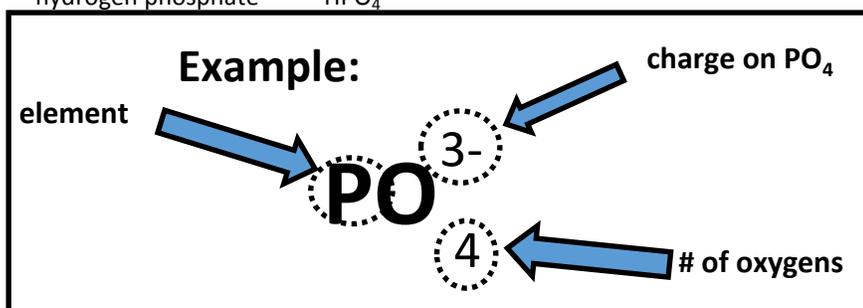


Pre-AP Chemistry Summer Practice

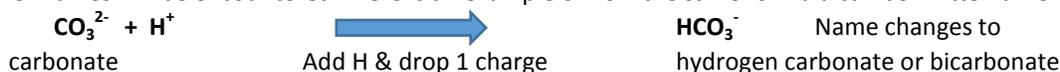
1. Memorize the formula (letter symbol of element w/numbers) and name for each polyatomic ion as described on the Common Polyatomic Ions chart below. Ions are characterized by the charges (+2, -3, etc) (listed in columns for ease of studying): Memorize the charge as part of the formula.

Common Polyatomic Ions					
- = -1 charge		+ = +1 charge			
<u>-1 charge ions</u>		<u>-2 charge ions</u>		<u>-3 charge ions</u>	
<u>NAME</u>	<u>Formula</u>	<u>NAME</u>	<u>Formula</u>	<u>NAME</u>	<u>Formula</u>
nitrate	NO_3^-	sulfate	SO_4^{2-}	phosphate	PO_4^{3-}
nitrite	NO_2^-	sulfite	SO_3^{2-}	arsenate	AsO_4^{3-}
hydroxide	OH^-	carbonate	CO_3^{2-}		
bromate	BrO_3^-	chromate	CrO_4^{2-}		
perchlorate	ClO_4^-	dichromate	$\text{Cr}_2\text{O}_7^{2-}$		
chlorate	ClO_3^-	oxalate	$\text{C}_2\text{O}_4^{2-}$		
chlorite	ClO_2^-	peroxide	O_2^{2-}		
hypochlorite	ClO^-	hydrogen phosphate	HPO_4^{2-}		
cyanide	CN^-				
permanganate	MnO_4^-				
hydrogen sulfate	HSO_4^-				
hydrogen carbonate	HCO_3^-				
acetate (2 forms)	$\text{C}_2\text{H}_3\text{O}_2^-$ CH_3COO^-				

<u>+1 charge</u>		<u>+2 charge</u>	
ammonium	NH_4^+	dimercury or mercury (I)	Hg_2^{2+}



Note: Other names will be encountered. Here is an example of how the same formula can be written differently.



2. Know the names and symbols for all elements #1-50 as well as symbols for lead, tin, barium, cesium, titanium, plutonium, silver, and gold. Do not worry about atomic numbers or atomic weight (the number above or below the letters denoting the chemical symbol).

3. In addition, know that Pb can have a charge of +2 or +4, Fe (+2, +3), and Cu (+1, +2).

4. Know the following prefixes from the metric system.

Prefix	Defintion	Abbreviation
nano-	10^{-9}	n
micro-	10^{-6}	μ
milli-	10^{-3}	m
centi-	10^{-2}	C
kilo-	10^3	k
mega-	10^6	M

5. Logon to Khan Academy or Google "Khan Academy" and watch the following videos entitled:

- a. "Introduction to Significant Figures"
- b. "Rules of Significant Figures"
- c. "Addition and Subtraction with Significant Figures"
- d. "Multiplying and Dividing with Significant Figures"
- e. "Unit Conversion Within the Metric System"