FLOWCHART FOR NAMING SIMPLE INORGANIC COMPOUNDS

Does the formula begin with H ?

NO | YES

Are there 2 atoms, both the same ?

YES | NO

It is an acid

Does the acid contain a polyatomic ion ? (more than 2 elements)

YES | NO

It is the diatomic gas H₂

Does it begin with a metal which has more than one charge (oxidation #) ? Ex: Fe, Ni, Cu, Sn, Hg, Pb, Co, Cr, Mn

NO | YES

Name the 1st element followed by its charge(Ox #) as a Roman numeral or use ous/ic

Does the polyatomic ion end in –"ate" or –"ite"?

-ate | -ite

Does the formula contain a polyatomic ion?

NO | YES

Is the polyatomic ion written first ?

NO | YES

Name the polyatomic ion, replacing –"ate" with –"ic" & add "acid"

Name the polyatomic ion, replacing –"ite" with –"ous" & add "acid"

Name the 1st element(s) then the polyatomic ion with either the "ite" or "ate" ending (may also contain "per" or "hypo" prefix)

Are both elements non-metals ?

NO | YES

Name the polyatomic ion 1st, then name the element 2nd. If there are 2 polyatomics, name the 1st, then the 2nd with either the "ite" or "ate" ending (may also contain "per" or "hypo" prefix)

Write the prefix "hydro", then the name of the 2nd element with the "ic" ending & add "acid"

Name the 1st element then the 2nd element with the "ide" ending.

Are both elements the same ?

NO | YES

Name the 1st element using the proper prefix (di, tri, etc), but never mono. Name the 2nd element with the proper prefix (including mono) & the "ide" ending.

It is a diatomic element. The compound has the same name as the element. ex: chlorine gas