

Acidic Nomenclature (These are ionic too!)

Acids - ionic compounds where the positive cation is H^{1+}

2 kinds of acids

(1) Binary Acids H^{1+} & a nonmetal anion

Names

- write the prefix **HYDRO-**, then 2nd element's name, change ending to **-ic acid**

Ex) HBr

hydrobromic acid

H_2S

hydrosulfuric acid

H_3N

hydronitric acid

HCN^*

hydrocyanic acid

Formulas

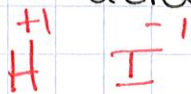
- write H^{1+} , & symbol & charge of nonmetal anion

- criss-cross charges

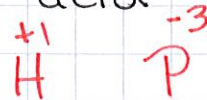
Ex) hydrochloric acid



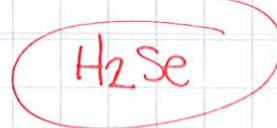
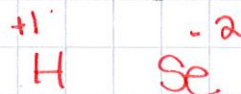
hydroiodic acid



hydrophosphoric acid



hydroseleenic acid



(2) Oxyacids - H^+ is the cation plus a polyatomic anion containing oxygen

names - do NOT use hydro-

If the polyatomic ion's name ends in:

-ate
change to
-ic acid

-ite
change to
-ous acid

If you
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you get the
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Ex) $HClO_2$ chlorite
chlorous acid
 H_3PO_4 phosphate
phosphoric acid

$HClO_3$ chlorate
chloric acid
 HNO_2 nitrite
nitrous acid

formulas

- write H^+ , then the appropriate polyatomic anion's symbol & charge

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- criss-cross charges

Ex) oxalic acid
 $H^+ \quad C_2O_4^{-2}$
 $H_2C_2O_4$
hypochlorous acid
 $H^+ \quad ClO^-$
 $HClO$

sulfurous acid
 $H^+ \quad SO_3^{-2}$
 H_2SO_3
acetic acid
 $H^+ \quad C_2H_3O_2^-$
 $HC_2H_3O_2$