11/13/07

Name _____ Period _____

COMMON IONS AND THEIR CHARGES

CATIONS (pos. ions)

1+

hydrogen	H^+
lithium	Li^+
sodium	Na^+
potassium	K^+
silver	Ag^+
ammonium	NH_4^+

2+

beryllium	Be^{2+}
magnesium	Mg^{2+}
calcium	Ca^{2+}
strontium	Sr^{2+}
barium	Ba^{2+}
zinc	Zn^{2+}

3+

aluminum	Al^{3+}
boron	B^{3+}

ANIONS (neg. ions)

1-

fluoride	F^-	acetate	$C_2H_3O_2^-$
chloride	Cl^-	nitrate	NO_3^-
bromide	Br^-	chlorate	ClO_3^-
iodide	I^-	bromate	BrO_3^-
hydride	H^-	iodate	IO_3^-
hydroxide	OH^-	bicarbonate	HCO_3^-
cyanide	CN^-	permanganate	MnO_4^-

2-

oxide	O^{2-}	carbonate	CO_3^{2-}
sulfide	S^{2-}	sulfate	SO_4^{2-}
peroxide	O_2^{2-}	chromate	CrO_4^{2-}
		dichromate	$Cr_2O_7^{2-}$

3-

nitride	N^{3-}	phosphate	PO_4^{3-}

Cations with multiple charges

cobalt	Co
copper	Cu
iron	Fe
lead	Pb
nickel	Ni
tin	Sn

PREFIXES AND SUFFIXES

per-		one more oxygen
-ite		one less oxygen (change -ate to -ite)
hypo-	-ite	two less oxygen
-ide		no oxygen

Name the following:

ClO_3^- _____

ClO_4^- _____

ClO_2^- _____

ClO^- _____

Cl^- _____

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DIATOMIC ELEMENTS (when <u>uncombined</u> with other elements)

H_2 O_2 N_2 F_2 Cl_2 Br_2 I_2 ($Br_2I_2N_2Cl_2H_2O_2F_2$)

RULES FOR NAMING ACIDS

1. Acids begin with H^+
2. "-ate" makes "-ic" (Ex. NO_3^- nitr<u>ate</u> = HNO_3 nitr<u>ic</u> acid)
3. "-ite" makes "-ous" (Ex. NO_2^- nitr<u>ite</u> = HNO_2 nitr<u>ous</u> acid)
4. "-ide" makes "hydro- -ic" (Ex. Cl^- chlor<u>ide</u> = HCl <u>hydro</u>chlor<u>ic</u> acid)

Name the following acids:

$HClO_3$ _____

$HClO_2$ _____

HClO _____

$HClO_4$ _____

HCl _____

H_2S _____

H_2SO_4 _____

H_2SO_3 _____

H_3PO_4 _____

HNO_3 _____

H_2CO_3 _____

$HC_2H_3O_2$ _____