

Name: _____

SCH 3U - Nomenclature Quiz #1

1. What is rule #1 when doing inorganic nomenclature?

cation first, anion second

2. What must be true about the total cationic and total anionic charges in order to have a properly constructed chemical formula

equal but opposite, or balanced

3. Classify each of the following elements as elements that form monovalent or polyvalent cations

${}_{20}\text{Ca}$, ${}_{26}\text{Fe}$, ${}_{50}\text{Sn}$, ${}_{6}\text{C}$, ${}_{3}\text{Li}$

Monovalent	Polyvalent
Ca, Li	Fe, Sn, C

4. What does the number in roman numerals that follows the cation name tell you exactly? When is it used? When is it not used?

tells you: **the charge (or oxidation state) on the cation**

used when: **polyvalent cations only**

not used when: **monovalent cations**

5. What are all the possible charges that a ${}_{17}\text{Cl}$ atom can have when it forms ions?

Cl^{1-} , Cl^{1+} , Cl^{3+} , Cl^{5+} , Cl^{7+}

6. Provide either names or formula as appropriate. For polyvalent cation compounds write the I.U.P.A.C. name only:

silver oxide	Ag_2O	SrCl_2	strontium chloride
carbon(IV) sulphide	CS_2	SO_2	sulphur(IV) oxide
magnesium fluoride	MgF_2	Sb_2O_3	antimony(III) oxide
aluminum chloride	AlCl_3	Rb_3P	rubidium phosphide
gallium(III) oxide	Ga_2O_3	Na_4C	sodium carbide
gold(III) nitride	AuN	Ca_2C	calcium carbide
copper(II) sulphide	CuS	W_2S_5	tungsten(V) sulphide
vanadium(V) oxide	V_2O_5	Hg_2O	mercury(I) oxide
zirconium phosphide	Zr_3P_4	CsF	cesium fluoride
mercury(II) bromide	HgBr_2	PoO	polonium(II) oxide
thallium(I) oxide	Tl_2O	SO_3	sulphur(VI) oxide
barium arsenide	Ba_3As_2	Tc_3N_4	technetium(IV) nitride
platinum(IV) nitride	Pt_3N_4	LaP	lanthanum phosphide
carbon(II) oxide	CO	Mo_3N_5	molybdenum(V) nitride
carbon(IV) oxide	CO_2	PdCl_4	palladium(IV) chloride
hydrogen oxide	H_2O	CrO_3	chromium(VI) oxide
potassium sulphide	K_2S	HfSe_2	hafnium selenide
iridium(IV) iodide	IrI_4	ThS_2	thorium sulphide
lead(IV) sulphide	PbS_2	XeF_4	xenon(IV) fluoride
bismuth(V) nitride	Bi_3N_5	RaSe	radium selenide