

Name _____ Period _____

LTHS: Chemistry

Unit 7 Review - Nomenclature

1. Know the name/formula of all anions and cations on your ion list.

2. What kind of atoms will gain electrons? What kind of atoms will lose electrons?

nonmetals gain } everything wants a full outer shell so it will gain to fill outer shell
metals lose } Or lose because shell underneath will be full

LT1: I can name molecular compound

3. What are the rules for naming covalent molecules?

1. Name 1st element
- use prefix (except mono)
2. Name 2nd element
- use prefix
- ending becomes -ide

LT2: I can write formulas for molecular compounds from the name

4. What are the prefixes for numbers 1-10?

1-mono	4-tetra	7-hepta
2-di	5-penta	8-octa
3-tri	6-hexa	9-nona
		10-deca

LT3: I can name ionic compounds.

5. Do any ions have multiple charges? Which ones? How can you tell the charge?

yes - mostly transition metals
(Not group IA, group IIA, Al, Zn, Cd, Ag)

Look @ Roman numeral
or look @ compound.

6. What rules exist for determining the name of an ionic compound?

1. Name cation
- determine Roman numeral if necessary
2. Name anion
- if its a single element change to -ide

Figure out how charges
cancel

7. When is it appropriate to use roman numerals? What do they stand for?

for metals with multiple charges possible.

The Roman numeral is the charge of the ion NOT subscript
in the formula

LT4: I can write formulas for ionic compounds.

8. What is the total charge of an ionic compound?

Always Neutral

9. What rules exist for determining the formula of an ionic compound?

1. Find symbols and charges
2. Look for LCM for the charges
3. Determine the # of each needed to cancel to form a neutral compound.

Practice Problems:

10. Name the following compounds:

A. PbS lead (II) sulfide	F. PbO lead (II) oxide
B. XeF ₆ xenon hexafluoride	G. P ₃ O ₈ triphosphorus octoxide
C. Ba(NO ₃) ₂ barium nitrate	H. CaCr ₂ O ₇ calcium dichromate
D. OBr ₃ oxygen tribromide	I. N ₄ O tetranitrogen monoxide
E. NaNO ₂ sodium nitrite	J. MnO ₂ manganese (IV) oxide

11. Write the following chemical formulas:

A. copper (II) sulfate CuSO ₄	F. dinitrogen decafluoride N ₂ F ₁₀
B. phosphorous pentachloride PCl ₅	G. sulfur difluoride SF ₂
C. lead (II) nitrate Pb(NO ₃) ₂	H. chlorine trifluoride ClF ₃
D. potassium nitrite KNO ₂	I. silicon heptoxide SiO ₇
E. sodium sulfite Na ₂ SO ₃	J. tin (IV) sulfide SnS ₂