

Naming

Ionic
M/NM

Covalent
NM/NM

Binary w/
Type A metals &
Zn,Cd,Ag

1. Write the name of 1st element (metal) -cation
2. Change the ending of the 2nd element (nonmetal) -anion to "-ide"

Binary w/ Type B (transition metals) & Sn,Pb

Do the exact same thing as Type A but leave parentheses beside the metal name to show the charge as a roman numeral.

Quick Way

1. Uncross the subscripts.
2. If the anion charge is correct, then just uncross to find the metal's charge
3. If the anion charge has been reduced (is incorrect) then multiply both subscripts by the number needed to correct the nonmetal's charge and un-reduce them.

Ternary w/ a Polyatomic Ion

Do the exact same thing as Type A, **BUT** look up the name of the polyatomic ion on the reference sheet.

If Type B metal don't forget (Roman Numeral) of metal's charge

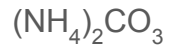
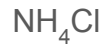
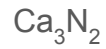
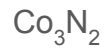
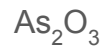
Note ammonium NH_4^+ is treated like a metal so it may come first in the compound. **

Binary Covalent Compound

Use prefixes to represent the subscript # on both names
-- EXCEPT → Do NOT use MONO on the first name --

1. Write the prefix and name of 1st nonmetal
2. Write the prefix and name of the 2nd nonmetal with the IDE ending

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



Formula Writing

Ionic
M/NM

Covalent
NM/NM

Binary w/ Type A metals & Zn,Cd,Ag

1. Write the symbol & charge of the metal.(cation)
2. Write the symbol & charge of the nonmetal. (anion)
3. If the charges are the same, drop them, Bring symbols together.

If the charges are different, drop sign & criss cross the numbers to the bottom as subscripts.

4. **Simply the subscripts if needed**

Binary w/ Type B (transition metals) metals & Sn,Pb

1. Write the symbol & charge of the metal (cation) that is seen in the parenthesis.
2. Write the symbol & charge of the nonmetal. (anion)
3. If the charges are the same, drop them, Bring symbols together.

If the charges are different, drop sign & criss cross the numbers to the bottom as subscripts.

4. **Simply the subscripts if needed**

Ternary w/ a Polyatomic Ion

**** Put Parentheses around all polyatomic ions****

1. Write the symbol & charge of the metal or ammonium-see ref. sheet
2. Write the symbol & charge of the nonmetal or polyatomic ion-see ref. sheet
3. If the charges are the same, drop them, Bring symbols together.

If the charges are different, drop charge & criss cross the numbers to the bottom as subscripts.

4. **Simply the subscripts if needed**

5. Remove parentheses if the subscript on the outside of it is a 1 or you did not criss cross.

Covalent Compound

1. Write the symbol of the first nonmetal & use the prefix as its subscript.
2. Write the symbol of the second nonmetal & use the prefix as its subscript.
3. **DO NOT SIMPLIFY!**

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

Examples:

Calcium bromide

Iron(III)chloride

Magnesium sulfate

Carbon monoxide

Aluminum oxide

Copper(I) oxide

Cobalt (II) hydroxide

Diarsenic trioxide

Lithium fluoride

Cobalt(II) nitride

Sodium nitrate

Sulfur hexoxide

Calcium nitride

Yttrium (I) oxide

Ammonium chloride

Dinitrogen tetrahydride

Potassium sulfide

Tin(IV) sulfide

Ammonium carbonate

Dihydrogen monoxide

Practice on your own using the U3 L9 CFU part TWO

You have already completed part ONE, now complete part TWO which is comprised of all naming and formula writing.

If you need the worksheet, click here:

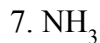
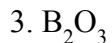
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Part TWO: Mixed Review

Determine whether the substance is ionic type A (I -A) ionic type B (I -B) or covalent (molecular) (C). If Ionic, you will need to decide whether you need to put a roman numeral in the name and always check charges in the formula. If Covalent, no need to use roman numerals in the name and not need to check charges in the formula.

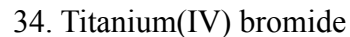
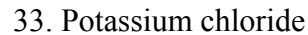
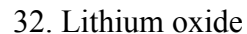
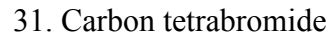
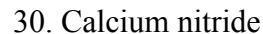
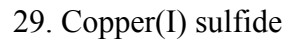
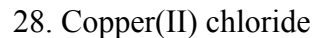
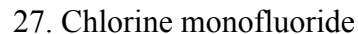
I /C

Provide the chemical name:



I /C

Provide the chemical formula:



_____ 11. MgO

_____ 12. B₂H₆

_____ 13. Li₂Te

_____ 14. Fe(NO₃)₃

_____ 15. CaSO₄

_____ 16. NaCl

_____ 17. K₂SO₄

_____ 18. CO₂

_____ 19. SF₆

_____ 36. Manganese(II) nitride

_____ 37. Calcium bromate

_____ 38. Sodium chloride

_____ 39. Trinitrogen dioxide

_____ 40. Lithium phosphate

_____ 41. Ammonium chloride

_____ 42. Copper(II) chlorite

_____ 43. Nitrogen monoxide

_____ 44. Iron(II) iodide

_____ 20. KClO₄

_____ 45. Calcium hydride