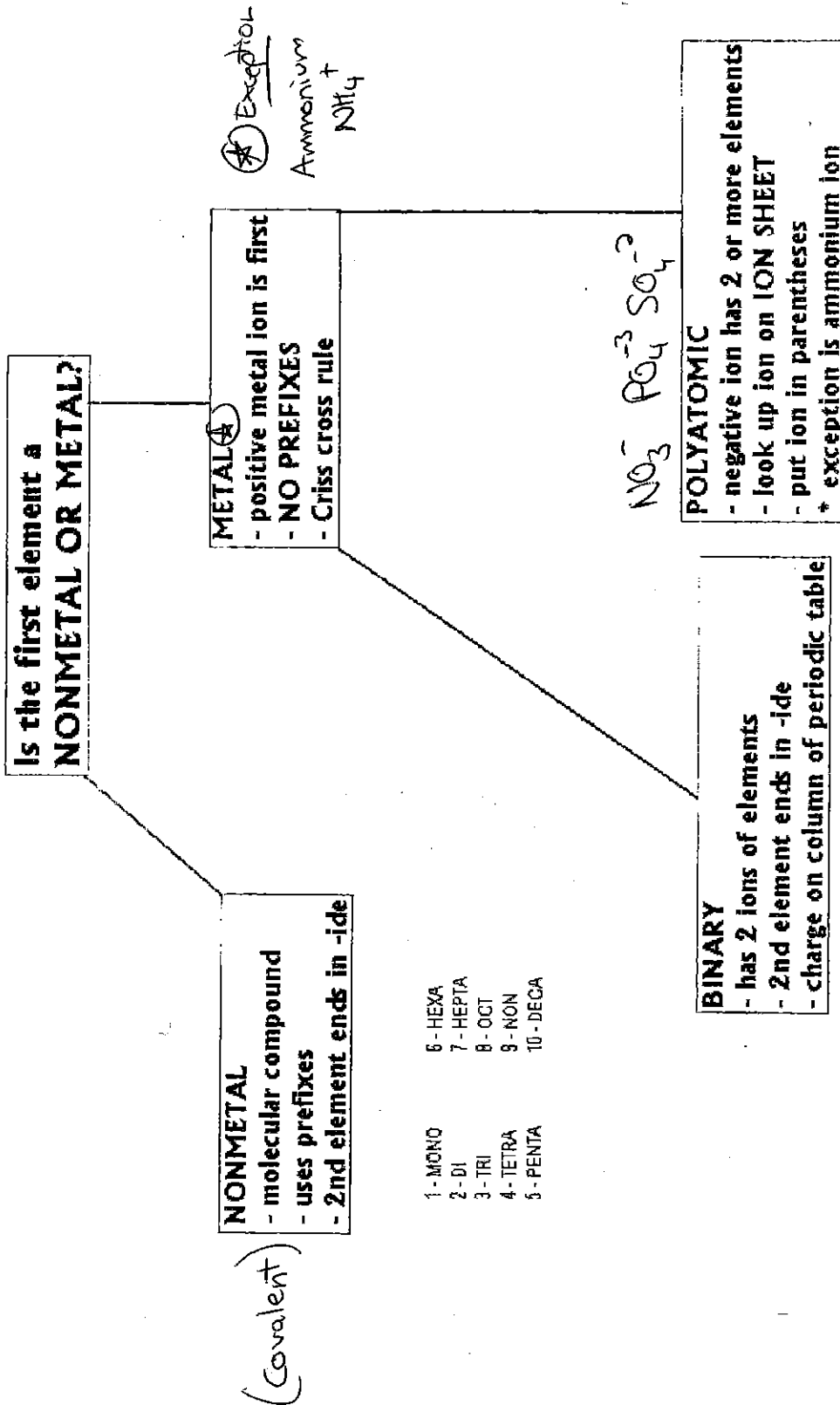


Chemistry

Naming Compounds Flow Chart
Use this Chart to aid you naming compounds



WORKSHEET: BINARY MOLECULAR COMPOUNDS

PREFIXES USED FOR WRITING FORMULAS FOR BINARY MOLECULAR COMPOUNDS:

Mono-	1	Hexa-	6
Di-	2	Hepta-	7
Tri-	3	Octa-	8
Tetra-	4	Nona-	9
Penta-	5	Deca-	10

Part I. Write formulas for the following compounds using prefixes and chemical symbols for the elements.

- | | |
|------------------------------|--------------------------|
| a. nitrogen dioxide | f. oxygen difluoride |
| b. nitrogen monoxide | g. disulfur dibromide |
| c. diphosphorus pentasulfide | h. carbon tetraiodide |
| d. iodine heptachloride | i. diphosphorus trioxide |
| e. silicon tetrafluoride | j. arsenic tribromide |

Part II. Name the following binary molecular compounds using the prefix system.

- | | |
|-------------------------|----------------------------|
| a. NH_3 | d. PCl_3 |
| b. SF_6 | e. Cl_2O_8 |
| c. N_2O | |

NAME _____

PERIOD _____

I. WRITE FORMULAS FOR THE FOLLOWING BINARY MOLECULAR COMPOUNDS:

(a) hydrogen chloride

(i) tetraphosphorus heptoxide

(b) sulfur dichloride

(j) arsenic pentachloride

(c) nitrogen trifluoride

(k) iodine tribromide

(d) aluminum trifluoride

(l) silicon dioxide

(e) dinitrogen difluoride

(m) iron dichloride

(f) carbon disulfide

(n) diphosphorus pentoxide

(g) phosphorus pentachloride

(o) nitrogen trihydride

(h) tungsten hexachloride

(p) iron tribromide

II. NAME THE FOLLOWING BINARY COMPOUNDS:

(a) HF

(b) NO₂

(c) SO₃

(d) PCl₅

(e) NO

(f) IBr₃

(g) S₄N₂

(h) SiC

Name: _____

Date: _____

	Name	Formula
1	Dibromine Monoxide	
2	Heptacarbon NonaSulfide	
3	Trinitrogen Octahydride	
4	Phosphorus Pentachloride	
5	Tetraselenium Heptafluoride	
6		AsCl_3
7		I_2F_7
8		P_4O_{10}
9		H_4Te
10		FeCl_3

NAMING MOLECULAR COMPOUNDS

Name _____

Name the following covalent compounds.

1. CO_2 _____
2. CO _____
3. SO_2 _____
4. SO_3 _____
5. N_2O _____
6. NO _____
7. N_2O_3 _____
8. NO_2 _____
9. N_2O_4 _____
10. N_2O_5 _____
11. PCl_3 _____
12. PCl_5 _____
13. NH_3 _____
14. SCl_6 _____
15. P_2O_5 _____
16. CCl_4 _____
17. SiO_2 _____
18. CS_2 _____
19. OF_2 _____
20. PBr_3 _____

NAMING IONIC COMPOUNDS

Name _____

Name the following compounds using the Stock Naming System.

1. CaCO_3 _____
2. KCl _____
3. FeSO_4 _____
4. LiBr _____
5. MgCl_2 _____
6. FeCl_3 _____
7. $\text{Zn}_3(\text{PO}_4)_2$ _____
8. NH_4NO_3 _____
9. $\text{Al}(\text{OH})_3$ _____
10. $\text{CuC}_2\text{H}_3\text{O}_2$ _____
11. PbSO_3 _____
12. NaClO_3 _____
13. CaC_2O_4 _____
14. Fe_2O_3 _____
15. $(\text{NH}_4)_3\text{PO}_4$ _____
16. NaHSO_4 _____
17. Hg_2Cl_2 _____
18. $\text{Mg}(\text{NO}_2)_2$ _____
19. CuSO_4 _____
20. NaHCO_3 _____
21. NiBr_3 _____
22. $\text{Be}(\text{NO}_3)_2$ _____
23. ZnSO_4 _____
24. AuCl_3 _____
25. KMnO_4 _____

Lots of Ionic Naming Practice Problems

Name the following ionic compounds:

- 1) NaBr _____
- 2) Sc(OH)₃ _____
- 3) V₂(SO₄)₃ _____
- 4) NH₄F _____
- 5) CaCO₃ _____
- 6) NiPO₄ _____
- 7) Li₂SO₃ _____
- 8) Zn₃P₂ _____
- 9) Sr(C₂H₃O₂)₂ _____
- 10) Cu₂O _____
- 11) Ag₃PO₄ _____
- 12) YClO₃ _____
- 13) SnS₂ _____
- 14) Ti(CN)₄ _____
- 15) KMnO₄ _____
- 16) Pb₃N₂ _____
- 17) CoCO₃ _____
- 18) CdSO₃ _____
- 19) Cu(NO₂)₂ _____
- 20) Fe(HCO₃)₂ _____

Write the formulas for the following ionic compounds:

- 21) lithium acetate _____
- 22) iron (II) phosphate _____
- 23) titanium (II) selenide _____
- 24) calcium bromide _____
- 25) gallium chloride _____
- 26) sodium hydride _____
- 27) beryllium hydroxide _____
- 28) zinc carbonate _____
- 29) manganese (VII) arsenide _____
- 30) copper (II) chlorate _____
- 31) cobalt (III) chromate _____
- 32) ammonium oxide _____
- 33) potassium hydroxide _____
- 34) lead (IV) sulfate _____
- 35) silver cyanide _____
- 36) vanadium (V) nitride _____
- 37) strontium acetate _____
- 38) molybdenum sulfate _____
- 39) platinum (II) sulfide _____
- 40) ammonium sulfate _____

WRITING FORMULAS FROM NAMES

Name _____

Write the formulas of the following compounds.

1. ammonium phosphate
2. iron (II) oxide
3. iron (III) oxide
4. carbon monoxide
5. calcium chloride
6. potassium nitrate
7. magnesium hydroxide
8. aluminum sulfate
9. copper (II) sulfate
10. lead (IV) chromate
11. diphosphorus pentoxide
12. potassium permanganate
13. sodium hydrogen carbonate
14. zinc nitrate
15. aluminum sulfite

NAMING MOLECULAR COMPOUNDS

1. CaCl_2 _____

11. MgO _____

2. CO_2 _____

12. NH_4Cl _____

3. H_2O _____

13. HCl _____

4. BaSO_4 _____

14. KI _____

5. K_2O _____

15. NaOH _____

6. NaF _____

16. NO_2 _____

7. Na_2CO_3 _____

17. AlPO_4 _____

8. CH_4 _____

18. FeCl_3 _____

9. SO_3 _____

19. P_2O_5 _____

10. LiBr _____

20. N_2O_3 _____