

Name: _____

20 Pts.

Chemistry Practice: Naming Compounds

1. Name these ionic binary compounds. (All cations have a single type of charge)

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|--------------------------------|---------------------------------|
| a.) _____ CaCl_2 | e.) _____ BaI_2 |
| b.) _____ MgO | f.) _____ Na_3N |
| c.) _____ K_2S | g.) _____ CaCl_2 |
| d.) _____ AgF | h.) _____ SrCl_2 |

2. Name these type II binary ionic compounds. (Cations have multiple charges, therefore all require roman numerals.)

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|-----------------------------------|---------------------------|
| a.) _____ SnBr_2 | e.) _____ NiBr_3 |
| b.) _____ Cr_2O_3 | f.) _____ PbO |
| c.) _____ FeCl_3 | g.) _____ PbCl_4 |
| d.) _____ HgI_2 | h.) _____ CuI |

3. Name these compounds that contain polyatomic ions.

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|-------------------------------------------------------|---------------------------------------------|
| a.) _____ $\text{Mg}(\text{NO}_3)_2$ | e.) _____ $\text{K}_2\text{Cr}_2\text{O}_7$ |
| b.) _____ $\text{Cr}(\text{CN})_3$ | f.) _____ $\text{Ba}_3(\text{PO}_4)_2$ |
| c.) _____ $\text{NH}_4\text{C}_2\text{H}_3\text{O}_2$ | g.) _____ KClO_3 |
| d.) _____ Na_2CO_3 | h.) _____ $\text{Pb}(\text{SO}_4)_2$ |

4. Name these binary molecular compounds. (Use prefixes. Avoid using mono with first element)

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|-------------------------------------|----------------------------------|
| a.) _____ CBr_4 | e.) _____ N_2O_4 |
| b.) _____ PCl_3 | f.) _____ CO |
| c.) _____ P_2S_5 | g.) _____ SO_3 |
| d.) _____ P_4O_{10} | h.) _____ SF_6 |

5. Naming Acids. Hydrogen appears first in formula. H-Anion.

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|---------------------------|---------------------------------------------|
| a.) _____ HCl | e.) _____ H_2S |
| b.) _____ HClO_3 | f.) _____ H_2SO_4 |
| c.) _____ HClO_2 | g.) _____ H_2SO_3 |
| d.) _____ HBr | h.) _____ $\text{HC}_2\text{H}_3\text{O}_2$ |

6. Homework. Name each compound. (These are a mixed selection of the four types above)

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|-----------|-------------------------------------------------|-----------|-------------------------------------------------|
| 1. _____ | Ag ₂ S | 41. _____ | UF ₆ |
| 2. _____ | Al ₂ O ₃ | 42. _____ | MgI ₂ |
| 3. _____ | SO ₂ | 43. _____ | CsNO ₃ |
| 4. _____ | Fe(OH) ₂ | 44. _____ | N ₂ O ₅ |
| 5. _____ | CrCl ₃ | 45. _____ | CuSO ₄ |
| 6. _____ | CaF ₂ | 46. _____ | NO |
| 7. _____ | PCl ₅ | 47. _____ | P ₄ O ₆ |
| 8. _____ | HF | 48. _____ | HNO ₃ |
| 9. _____ | (NH ₄) ₂ SO ₄ | 49. _____ | MnO |
| 10. _____ | CO ₂ | 50. _____ | Ni ₃ (PO ₄) ₂ |
| 11. _____ | NiBr ₃ | 51. _____ | Na ₂ SO ₃ |
| 12. _____ | SF ₆ | 52. _____ | Cu(CN) ₂ |
| 13. _____ | CuCl | 53. _____ | PbCO ₃ |
| 14. _____ | NaC ₂ H ₃ O ₂ | 54. _____ | OF ₂ |
| 15. _____ | AsI ₃ | 55. _____ | NaCl |
| 16. _____ | OF ₂ | 56. _____ | Fe(NO ₃) ₃ |
| 17. _____ | HgSO ₄ | 57. _____ | Fe(NO ₂) ₃ |
| 18. _____ | NaHCO ₃ | 58. _____ | FeN |
| 19. _____ | Fe ₃ (PO ₄) ₂ | 59. _____ | H ₃ BO ₃ |
| 20. _____ | K ₂ CrO ₄ | 60. _____ | NH ₄ OH |
| 21. _____ | MgS | 61. _____ | Mn(OH) ₂ |
| 22. _____ | H ₃ PO ₄ | 62. _____ | KClO |
| 23. _____ | N ₂ O | 63. _____ | KClO ₂ |
| 24. _____ | CuClO ₃ | 64. _____ | KClO ₃ |
| 25. _____ | Zn(OH) ₂ | 65. _____ | KClO ₄ |
| 26. _____ | AgC ₂ H ₃ O ₂ | 66. _____ | CsClO ₄ |
| 27. _____ | TiCl ₄ | 67. _____ | Cu ₃ (PO ₄) ₂ |
| 28. _____ | BaS | 68. _____ | P ₂ O ₅ |
| 29. _____ | H ₂ SO ₄ | 69. _____ | Pb(MnO ₄) ₄ |
| 30. _____ | Pb ₃ (PO ₄) ₄ | 70. _____ | SnCrO ₄ |
| 31. _____ | HCl | 71. _____ | AuCl ₃ |
| 32. _____ | Ti(CN) ₄ | 72. _____ | N ₂ O |
| 33. _____ | PCl ₃ | 73. _____ | Na ₂ S |
| 34. _____ | Co(NO ₃) ₂ | 74. _____ | MgCO ₃ |
| 35. _____ | Al(ClO ₄) ₃ | 75. _____ | U(SO ₄) ₃ |
| 36. _____ | AgNO ₃ | 76. _____ | SO ₃ |
| 37. _____ | Au ₂ S ₃ | 77. _____ | NaCN |
| 38. _____ | (NH ₄) ₂ CO ₃ | 78. _____ | H ₂ C ₂ O ₄ |
| 39. _____ | NaOH | 79. _____ | SnCl ₂ |
| 40. _____ | H ₂ CO ₃ | 80. _____ | Mg ₃ (PO ₄) ₂ |