

Homework: Chemical Formulas Additional Practice with Naming

Your Name:

Date: 2024-03-21 Th

Class:

Part I

Name the following compounds if they have a complete chemical formula. These compounds are molecular. If two ions are given then build a correct ionic compound formula and then name the compound.

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| 1. N_2O DINITROGEN MONOXIDE | 11. SO_2 SULFUR DIOXIDE | 21. $Cu^{2+} CN^-$ $Cu(CN)_2$ COPPER(II) CYANIDE |
| 2. NO NITROGEN MONOXIDE | 12. SO_3 SULFUR TRIOXIDE | 22. $NH_4^+ Cr_2O_7^{2-}$ $(NH_4)_2Cr_2O_7$ AMMONIUM DICHROMATE |
| 3. NO_2 NITROGEN DIOXIDE | 13. NH_3 AMMONIA | 23. $K^+ MnO_4^-$ $KMnO_4$ POTASSIUM PERMANGANATE |
| 4. N_2O_3 DINITROGEN TRIOXIDE | 14. CH_4 METHANE | 24. $Sn^{4+} SO_4^{2-}$ $Sn(SO_4)_2$ TIN(IV) SULFATE |
| 5. N_2O_4 DINITROGEN TETROXIDE | 15. H_2S DIHYDROGEN SULFIDE | 25. $Fe^{2+} N^{3-}$ Fe_3N_2 IRON(II) NITRIDE |
| 6. N_2O_5 DINITROGEN PENTOXIDE | 16. SF_4 SULFUR TETRAFLUORIDE | 26. $Cs^+ O^{2-}$ Cs_2O CESIUM OXIDE |
| 7. PCl_3 PHOSPHORUS TRICHLORIDE | 17. SF_6 SULFUR HEXAFLUORIDE | 27. $Ca^{2+} O^{2-}$ CaO CALCIUM OXIDE |
| 8. PCl_5 PHOSPHORUS PENTACHLORIDE | 18. $Sn^{2+} Cl^-$ $SnCl_2$ TIN(II) CHLORIDE | 28. $Al^{3+} O^{2-}$ Al_2O_3 ALUMINUM OXIDE |
| 9. CO CARBON MONOXIDE | 19. $Sn^{4+} S^{2-}$ SnS_2 TIN(IV) SULFIDE | 29. $H^+ SO_4^{2-}$ H_2SO_4 SULFURIC ACID |
| 10. CO_2 CARBON DIOXIDE | 20. $Cu^+ ClO_3^-$ $CuClO_3$ COPPER(I) CHLORATE | 30. $H^+ NO_3^-$ HNO_3 NITRIC ACID |

Part II

Name the following compounds or elements. Some are ionic, some are molecular, some are acids, and some are elements.

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| 1. CS_2 CARBON DISULFIDE | 11. $Ni(ClO_3)_3$ NICKEL(III) CHLORATE | 21. HNO_2 NITROUS ACID |
| 2. TiS_2 TITANIUM(IV) SULFIDE | 12. $Pb(ClO_4)_4$ LEAD(IV) PERCHLORATE | (22) HNO_3 NITRIC ACID |
| 3. $Zr(SO_4)_2$ ZIRCONIUM(IV) SULFATE | 13. $HClO_3$ CHLORIC ACID | 23. Co_3N_2 COBALT(II) NITRIDE |
| 4. $SnSO_3$ TIN(II) SULFITE | 14. $HClO$ HYPOCHLOROUS ACID | 24. Na_3PO_4 SODIUM PHOSPHATE |
| (5) H_2SO_4 SULFURIC ACID | 15. H_2 HYDROGEN | 25. Ca_3P_2 CALCIUM PHOSPHIDE |
| 6. H_2SO_3 SULFUROUS ACID | (16) N_2O_5 DINITROGEN PENTOXIDE | 26. PF_5 PHOSPHORUS PENTAFLUORIDE |
| 7. SCl_2 SULFUR DICHLORIDE | 17. NBr_3 NITROGEN TRIBROMIDE | 27. $BrCl_3$ BROMINE TRICHLORIDE |
| 8. $FeCl_3$ IRON(III) CHLORIDE | 18. $CsBr$ CESIUM BROMIDE | ~ 28. $Cu(BrO_4)_2$ COPPER(II) PERBROMATE |
| 9. $NaClO$ SODIUM HYPOCHLORITE | 19. $Ba(NO_3)_2$ BARIUM NITRATE | ~ 29. $CuIO_3$ COPPER(I) IODATE |
| 10. $Mg(ClO_2)_2$ MAGNESIUM CHLORITE | 20. $V(NO_2)_3$ VANADIUM(III) NITRITE | 30. Ag SILVER |

Part III

Write formulas for the following compounds. Some compounds are ionic, some are molecular, and some are acids.

1. Lithium Nitrate LiNO_3
2. Sodium Nitrite NaNO_2
3. Hydroiodic Acid HI
4. Potassium Sulfite K_2SO_3
5. Chlorine Pentafluoride ClF_5
6. Rubidium Sulfate Rb_2SO_4
7. Calcium Chromate CaCrO_4
8. Magnesium Dichromate MgCr_2O_7
9. Carbon Tetrachloride CCl_4
10. Perchloric Acid HClO_4
11. Iron(III) Hydride FeH_3
12. Tetraphosphorus Decoxide P_4O_{10}
13. Iron(III) Hydroxide $\text{Fe}(\text{OH})_3$
14. Xenon Tetrafluoride XeF_4
15. Hydrochloric Acid HCl
16. Silicon Disulfide SiS_2
17. Chlorine Monobromide ClBr
18. Nitrogen Trifluoride NF_3
19. Tin(IV) Iodide SnI_4
20. Sodium Metal Na
21. Silicon Tetraiodide SiI_4
22. Tin(II) Phosphate $\text{Sn}_3(\text{PO}_4)_2$
23. Phosphorus Pentabromide PBr_5
24. Sodium Carbonate Na_2CO_3
25. Sodium Bicarbonate NaHCO_3
26. Nitric Acid HNO_3
27. Cobalt(III) Cyanide $\text{Co}(\text{CN})_3$
28. Dinitrogen Tetrasulfide N_2S_4
29. Solid Iodine I_2
30. Copper(II) Chlorite $\text{Cu}(\text{ClO}_2)_2$