

Chemistry: Covalent Binary Compounds: Nonmetal–Nonmetal Combinations

Write the name of each of the following compounds.

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|------------------------------------|----------|-----------------------------|
| 1. HF | | 1. hydrogen monofluoride |
| 2. H ₂ S | | 2. dihydrogen monosulfide |
| 3. NO | | 3. nitrogen monoxide |
| 4. N ₂ O | | 4. dinitrogen monoxide |
| 5. NO ₂ | | 5. nitrogen dioxide |
| 6. N ₂ O ₅ | | 6. dinitrogen pentaoxide |
| 7. SO ₂ | | 7. sulfur dioxide |
| 8. CBr ₄ | | 8. carbon tetrabromide |
| 9. C ₂ H ₆ | (ethane) | 9. dicarbon hexahydride |
| 10. C ₄ H ₁₀ | (butane) | 10. tetracarbon decahydride |

Write the chemical formula for each of the given names.

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|----------------------------|-----------|-----------------------------------|
| 11. nitrogen triiodide | | 11. NI ₃ |
| 12. dinitrogen tetroxide | | 12. N ₂ O ₄ |
| 13. sulfur trioxide | | 13. SO ₃ |
| 14. carbon monoxide | | 14. CO |
| 15. dihydrogen monoxide | | 15. H ₂ O |
| 16. hydrogen monobromide | | 16. HBr |
| 17. phosphorus trichloride | | 17. PCl ₃ |
| 18. tricarbon octahydride | (propane) | 18. C ₃ H ₈ |
| 19. carbon tetrahydride | (methane) | 19. CH ₄ |
| 20. dicarbon tetrahydride | (ethene) | 20. C ₂ H ₄ |

Chemistry: Ionic Binary Compounds: Single-Charge Cations

Write the name of each of the following compounds.

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|----------------------------|------------------------|
| 1. Na_2S | 1. sodium sulfide |
| 2. Al_2O_3 | 2. aluminum oxide |
| 3. NaCl | 3. sodium chloride |
| 4. RbI | 4. rubidium iodide |
| 5. ZnBr_2 | 5. zinc bromide |
| 6. AgCl | 6. silver chloride |
| 7. BN | 7. boron nitride |
| 8. BaF_2 | 8. barium fluoride |
| 9. Sr_3N_2 | 9. strontium nitride |
| 10. MgCl_2 | 10. magnesium chloride |

Write the chemical formula for each of the given names.

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|------------------------|--|-----------------------------|
| 11. magnesium nitride | Mg^{2+} N^{3-} | 11. Mg_3N_2 |
| 12. calcium oxide | Ca^{2+} O^{2-} Ca_2O_2 | 12. CaO |
| 13. silver fluoride | Ag^{1+} F^{1-} | 13. AgF |
| 14. beryllium chloride | Be^{2+} Cl^{1-} | 14. BeCl_2 |
| 15. potassium iodide | K^{1+} I^{1-} | 15. KI |
| 16. aluminum chloride | Al^{3+} Cl^{1-} | 16. AlCl_3 |
| 17. zinc oxide | Zn^{2+} O^{2-} Zn_2O_2 | 17. ZnO |
| 18. barium bromide | Ba^{2+} Br^{1-} | 18. BaBr_2 |
| 19. lithium nitride | Li^{1+} N^{3-} | 19. Li_3N |
| 20. potassium sulfide | K^{1+} S^{2-} | 20. K_2S |

Chemistry: Ionic Compounds: Formulas and Naming

Write the name of each of the following compounds.

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|---------------------------------------|---|------------------------|
| 1. NH_4Cl | | 1. ammonium chloride |
| 2. $\text{NaC}_2\text{H}_3\text{O}_2$ | | 2. sodium acetate |
| 3. $\text{Ca}(\text{BrO}_3)_2$ | | 3. calcium bromate |
| 4. $\text{Pb}(\text{SO}_4)_2$ | $\text{Pb}^{4+} \quad 2 \text{SO}_4^{2-}$ | 4. lead (IV) sulfate |
| 5. $(\text{NH}_4)_3\text{N}$ | | 5. ammonium nitride |
| 6. NH_4NO_3 | | 6. ammonium nitrate |
| 7. $\text{Sr}_3(\text{PO}_4)_2$ | | 7. strontium phosphate |
| 8. BaSO_4 | | 8. barium sulfate |
| 9. AgIO_3 | | 9. silver iodate |
| 10. KCN | | 10. potassium cyanide |
| 11. AuNO_3 | $\text{Au}^{1+} \quad \text{NO}_3^{1-}$ | 11. gold (I) nitrate |

Write the chemical formula for each of the given names.

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|---------------------------|--|---|
| 12. sodium cyanide | $\text{Na}^{1+} \quad \text{CN}^{1-}$ | 12. NaCN |
| 13. barium nitrate | $\text{Ba}^{2+} \quad \text{NO}_3^{1-}$ | 13. $\text{Ba}(\text{NO}_3)_2$ |
| 14. ammonium sulfate | $\text{NH}_4^{1+} \quad \text{SO}_4^{2-}$ | 14. $(\text{NH}_4)_2\text{SO}_4$ |
| 15. titanium (II) cyanide | $\text{Ti}^{2+} \quad \text{CN}^{1-}$ | 15. $\text{Ti}(\text{CN})_2$ |
| 16. calcium phosphate | $\text{Ca}^{2+} \quad \text{PO}_4^{3-}$ | 16. $\text{Ca}_3(\text{PO}_4)_2$ |
| 17. cesium carbonate | $\text{Cs}^{1+} \quad \text{CO}_3^{2-}$ | 17. Cs_2CO_3 |
| 18. iron (III) acetate | $\text{Fe}^{3+} \quad \text{C}_2\text{H}_3\text{O}_2^{1-}$ | 18. $\text{Fe}(\text{C}_2\text{H}_3\text{O}_2)_3$ |
| 19. calcium sulfide | $\text{Ca}^{2+} \quad \text{S}^{2-}$ | 19. CaS |
| 20. beryllium bicarbonate | $\text{Be}^{2+} \quad \text{HCO}_3^{1-}$ | 20. $\text{Be}(\text{HCO}_3)_2$ |
| 21. rubidium iodate | $\text{Rb}^{1+} \quad \text{IO}_3^{1-}$ | 21. RbIO_3 |
| 22. copper (II) fluoride | $\text{Cu}^{2+} \quad \text{F}^{1-}$ | 22. CuF_2 |
| 23. chromium (VI) oxide | $\text{Cr}^{6+} \quad \text{O}^{2-}$ | 23. CrO_3 |