

3. WRITING FORMULAS AND NAMING COMPOUNDS (Ch. 2)

These problems are intended to *supplement* the problems in the textbook, not *replace* them.

Questions

Name these ionic and molecular compounds:

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|---------------------------------|----------------------------------|--|
| 1. NaBr | 10. Al_2Se_3 | 19. $\text{Na}_2\text{S}_2\text{O}_3$ |
| 2. CaO | 11. Cs_3N | 20. CuO |
| 3. MnPO_4 | 12. CrS | 21. N_2O |
| 4. P_4O_{10} | 13. BBr_3 | 22. $\text{Cr}(\text{H}_2\text{PO}_4)_3$ |
| 5. $\text{Ba}(\text{OH})_2$ | 14. NH_4OH | 23. PbSO_3 |
| 6. $(\text{NH}_4)_2\text{SO}_4$ | 15. $\text{Ca}_3(\text{PO}_4)_2$ | 24. B_2O_3 |
| 7. BrF_5 | 16. N_2O_5 | 25. $(\text{NH}_4)_2\text{CO}_3$ |
| 8. Cu_2O | 17. CdI_2 | 26. BaH_2 |
| 9. $\text{Zn}(\text{CN})_2$ | 18. Al_2Te_3 | 27. Hg_2Cl_2 |

Write the formulas for these ionic and molecular compounds:

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|----------------------------|---------------------------------|
| 28. barium chloride | 42. tetraarsenic hexoxide |
| 29. potassium sulfide | 43. sodium sulfate |
| 30. iron(II) hypochlorite | 44. lead(II) bicarbonate |
| 31. silicon tetrachloride | 45. nickel(II) thiocyanate |
| 32. rubidium carbide | 46. strontium chlorate |
| 33. ammonium phosphide | 47. mercury(II) bromide |
| 34. krypton difluoride | 48. iron(III) nitrate |
| 35. calcium nitrate | 49. tin(IV) iodide |
| 36. magnesium sulfite | 50. cesium dichromate |
| 37. silver chromate | 51. gold(III) bisulfite |
| 38. potassium permanganate | 52. strontium carbonate |
| 39. ammonium oxalate | 53. manganese(III) chlorite |
| 40. chlorine dioxide | 54. aluminum hydrogen phosphate |
| 41. lithium chlorite | |

Answers

If you cannot figure out how to get the correct answer, go to your instructor, Science Tutoring Center, SI, etc. In addition to the names or formulas, there is an "M" or "I" to indicate whether each one is a molecular or ionic compound.

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| 1. I – sodium bromide | 28. I – BaCl ₂ |
| 2. I – calcium oxide | 29. I – K ₂ S |
| 3. I – manganese(III) phosphate | 30. I – Fe(ClO) ₂ |
| 4. M – tetraphosphorus decoxide | 31. M – SiCl ₄ |
| 5. I – barium hydroxide | 32. I – Rb ₄ C |
| 6. I – ammonium sulfate | 33. I – (NH ₄) ₃ P |
| 7. M – bromine pentafluoride | 34. M – KrF ₂ |
| 8. I – copper(I) oxide | 35. I – Ca(NO ₃) ₂ |
| 9. I – zinc cyanide | 36. I – MgSO ₃ |
| 10. I – aluminum selenide | 37. I – Ag ₂ CrO ₄ |
| 11. I – cesium nitride | 38. I – KMnO ₄ |
| 12. I – chromium(II) sulfide | 39. I – (NH ₄) ₂ C ₂ O ₄ |
| 13. M – boron tribromide | 40. M – ClO ₂ |
| 14. I – ammonium hydroxide | 41. I – LiClO ₂ |
| 15. I – calcium phosphate | 42. M – As ₄ O ₆ |
| 16. M – dinitrogen pentoxide | 43. I – Na ₂ SO ₄ |
| 17. I – cadmium iodide | 44. I – Pb(HCO ₃) ₂ |
| 18. I – aluminum telluride | 45. I – Ni(SCN) ₂ |
| 19. I – sodium thiosulfate | 46. I – Sr(ClO ₃) ₂ |
| 20. I – copper(II) oxide | 47. I – HgBr ₂ |
| 21. M – dinitrogen monoxide | 48. I – Fe(NO ₃) ₃ |
| 22. I – chromium(III) dihydrogen phosphate | 49. I – SnI ₄ |
| 23. I – lead(II) sulfite | 50. I – Cs ₂ Cr ₂ O ₇ |
| 24. M – diboron trioxide | 51. I – Au(HSO ₃) ₃ |
| 25. I – ammonium carbonate | 52. I – SrCO ₃ |
| 26. I – barium hydride | 53. I – Mn(ClO ₂) ₃ |
| 27. I – mercury(I) chloride | 54. I – Al ₂ (HPO ₄) ₃ |