

Chemical Nomenclature

Covalent (or Molecular) Compounds Practice (i.e., nonmetal-nonmetal combinations)

Write the correct name for each of the following compounds.

1. P_2O_5 _____
2. NH_3 _____
3. SiO_2 _____
4. CF_4 _____
5. PF_5 _____
6. NBr_3 _____
7. C_2Br_6 _____
8. SO_2 _____
9. CS_2 _____
10. N_2O _____

Practice

Write the correct formula for each of the following compounds.

11. dinitrogen trioxide _____
12. nitrogen triiodide _____
13. phosphorus trifluoride _____
14. silicon tetrafluoride _____
15. bromine monofluoride _____
16. silicon dioxide _____
17. sulfur hexafluoride _____
18. tetrasulfur heptanitride _____
19. oxygen difluoride _____
20. silicon disulfide _____

Fixed-Charge Cations Practice

Name the following ionic compounds.

1. NaBr _____
2. Al(OH)₃ _____
3. B₂(SO₄)₃ _____
4. NH₄F _____
5. CaCO₃ _____
6. GaPO₄ _____
7. Li₂SO₃ _____
8. Zn₃P₂ _____
9. Sr(CH₃COO)₂ _____
10. K₂O _____
11. Ag₃PO₄ _____
12. LiClO₃ _____
13. RaS _____
14. Mg(CN)₂ _____
15. KMnO₄ _____

Write the formulas for the following ionic compounds.

16. sodium oxide _____
17. beryllium hydroxide _____
18. zinc carbonate _____
19. barium arsenide _____
20. radium chlorate _____
21. aluminum chromate _____
22. ammonium selenide _____
23. potassium hydroxide _____
24. zinc sulfate _____
25. silver cyanide _____
26. cadmium nitride _____
27. magnesium acetate _____
28. tantalum cyanide _____
29. calcium sulfide _____
30. ammonium sulfate _____

Variable-Charge Cations Practice

Name the following ionic compounds.

1. CuBr _____
2. Au(OH)_3 _____
3. $\text{V}_2(\text{SO}_4)_3$ _____
4. AuF _____
5. CoCO_3 _____
6. NiPO_4 _____
7. Au_2SO_3 _____
8. Cu_3P_2 _____
9. $\text{Fe}(\text{CH}_3\text{COO})_2$ _____
10. Cu_2O _____
11. Au_3PO_4 _____
12. Ru_2S_3 _____
13. SnS_2 _____
14. $\text{Ti}(\text{CN})_4$ _____
15. CuMnO_4 _____

Write the formulas for the following ionic compounds.

16. nickel(III) acetate _____
17. iron(II) phosphate _____
18. titanium(II) selenide _____
19. cobalt(II) bromide _____
20. rhodium(III) chloride _____
21. osmium(II) hydroxide _____
22. uranium(III) hydroxide _____
23. tungsten(VI) carbonate _____
24. manganese(VII) arsenide _____
25. copper(II) chlorate _____
26. vanadium(III) chromate _____
27. iridium(III) oxide _____
28. gold(III) sulfate _____
29. lead(IV) sulfite _____
30. platinum(II) cyanide _____

What Ions are Present, and How Many of Each?

Write out the two types of ions present in each formula, and how many of each. Do NOT write "1's". The first two have been done for you.

1. CoBr_2 $\text{Co}^{2+} + 2 \text{Br}^-$
2. $\text{Al}(\text{OH})_3$ $\text{Al}^{3+} + 3 \text{OH}^-$
3. $\text{Fe}_2(\text{SO}_4)_3$
4. CsF
5. CaCO_3
6. NiSO_4
7. Au_2S
8. Cu_3N_2
9. $\text{Sc}(\text{CH}_3\text{COO})_3$
10. Cu_2SO_4
11. Au_3P
12. AgClO_3
13. $\text{Sn}(\text{SO}_4)_2$
14. $\text{Y}(\text{CN})_3$
15. $\text{Zn}(\text{MnO}_4)_2$
16. NaCl
17. $\text{Fe}(\text{CH}_3\text{COO})_3$
18. $\text{Co}_2(\text{CrO}_4)_3$
19. NH_4NO_3
20. CaCl_2
21. GaN
22. $\text{Ti}(\text{SO}_4)_2$
23. Ag_3P
24. SrCr_2O_7
25. HgO
26. K_3PO_4
27. LiCl
28. $\text{Ra}(\text{NO}_2)_2$
29. $\text{Sn}(\text{CN})_2$
30. K_2CrO_4

Acid Nomenclature Practice

Name the following acids. Assume all compounds are dissolved in water.

1. HBr _____
2. HBrO₃ _____
3. HNO₂ _____
4. H₃PO₄ _____
5. H₂CO₃ _____
6. H₃PO₃ _____
7. H₂SO₃ _____
8. HNO₃ _____
9. HI _____
10. HF _____
11. H₂S _____
12. HClO₃ _____
13. HIO₄ _____
14. HBrO _____
15. HIO₃ _____

Write the formulas for the following acids. There is no need to write (aq) after each formula.

16. sulfuric acid _____
17. hypophosphorous acid _____
18. hypoiodous acid _____
19. hydroselenic acid _____
20. perbromic acid _____
21. hyponitrous acid _____
22. hyposulfurous acid _____
23. chlorous acid _____
24. hydrochloric acid _____
25. hypochlorous acid _____
26. iodous acid _____
27. acetic acid _____
28. bromous acid _____
29. perchloric acid _____
30. carbonic acid _____