

P G6 (pg 1 of 2) **REVIEW: Ionic, Molecular, and Acids**

Name _____ Per _____

Write the formula or the name for the following compounds.

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|--------------------------|-----------------------------------|--|
| 1. copper(II) bromate | 13. sulfur trioxide | 25. CCl_4 |
| 2. dichlorine heptoxide | 14. mercury(I) borate | 26. $(\text{NH}_4)_3\text{As}$ |
| 3. nickel(II) sulfite | 15. ammonium telluride | 27. Cl_2O_7 |
| 4. acetic acid | 16. citric acid | 28. $\text{NH}_4\text{C}_2\text{H}_3\text{O}_2$ |
| 5. dihydrogen dioxide | 17. platinum(IV) cyanide | 29. Acid: $\text{H}_2\text{C}_4\text{H}_4\text{O}_6$ |
| 6. copper(II) phosphate | 18. osmium(III) ferricyanide | 30. $\text{Al}(\text{HCO}_3)_3$ |
| 7. nitrogen monoxide | 19. TiSe_2 | 31. PF_3 |
| 8. manganese(IV) sulfite | 20. S_2O_5 | 32. Au_2CO_3 |
| 9. hydrosulfuric acid | 21. Acid: H_3PO_3 | 33. Acid: H_3BO_3 |
| 10. tin(IV) acetate | 22. WO | 34. $\text{Zn}(\text{BrO})_2$ |
| 11. hydrobromic acid | 23. N_2O | 35. $\text{Ca}_2(\text{Fe}(\text{CN})_6)$ |
| 12. lead(IV) phosphide | 24. $(\text{NH}_4)_3\text{PO}_3$ | 36. Acid: H_3AsO_4 |

P G6 (pg 2 of 2) **REVIEW: Ionic, Molecular, and Acids****ANSWERS**

Remember that for molecular compounds, no charges are involved, use the prefixes to determine the number of each atom. For ionic, do not use prefixes unless they are a part of the name of the polyatomic ion.

1. ionic: $\text{Cu}(\text{BrO}_3)_2$
2. molecular: Cl_2O_7
3. ionic: NiSO_3
4. acidic: $\text{HC}_2\text{H}_3\text{O}_2$
5. molecular: H_2O_2 (also known as hydrogen peroxide)
6. ionic: $\text{Cu}_3(\text{PO}_4)_2$
7. molecular: NO
8. ionic: $\text{Mn}(\text{SO}_3)_2$
9. acidic: H_2S
10. ionic: $\text{Sn}(\text{C}_2\text{H}_3\text{O}_2)_4$
11. acidic: HBr
12. ionic: Pb_3P_4
13. molecular: SO_3
14. ionic: Hg_3BO_3
15. ionic: $(\text{NH}_4)_2\text{Te}$
16. acidic: $\text{H}_3\text{C}_6\text{H}_5\text{O}_7$
17. ionic: $\text{Pt}(\text{CN})_4$
18. ionic: $\text{OsFe}(\text{CN})_6$
19. ionic: titanium(IV) selenide
20. molecular: disulfur pentoxide
21. acidic: phosphorus acid
22. ionic: tungsten(II) oxide
23. molecular: dinitrogen oxide
24. ionic: ammonium phosphite
25. molecular: carbon tetrachloride
26. ionic: ammonium arsenide
27. molecular: dichlorine heptoxide
28. ionic: ammonium acetate
29. acidic: tartaric acid
30. ionic: aluminum bicarbonate
31. molecular: phosphorous trifluoride
32. ionic: gold(I) carbonate
33. acidic: boric acid
34. ionic: zinc hypobromite
35. ionic: calcium ferrocyanide Looking at the polyatomic ion chart you will find 2 ions with the same formula that are differently charged; ferrocyanide $\text{Fe}(\text{CN})_6^{4-}$ and ferricyanide $\text{Fe}(\text{CN})_6^{3-}$ how can you tell which one is in this compound? This is the only time we need to look to the cation to give us information about the anion. Ca carries a $2+$ charge. Since there are 2 Ca^{2+} 's in the compound, that is a total of $4+$, thus paired with ferrocyanide. If the formula were $\text{Ca}_3(\text{Fe}(\text{CN})_6)_2$ then the compound would be calcium ferricyanide.
36. acidic: arsenic acid