

Name the following ionic compounds:	Give formulas to these ionic compound names:
1. $\text{NH}_4\text{Br}$ - Ammonium bromide 2. $\text{Cr}_2\text{O}_3$ - Chromium (III) oxide 3. $\text{Co}(\text{NO}_3)_2$ - Cobalt (II) nitrate 4. $\text{K}_2\text{SO}_4$ - Potassium sulfate 5. $\text{Ba}(\text{OH})_2$ – Barium hydroxide 6. $\text{FeCl}_3$ – Iron (III) chloride 7. $\text{AlF}_3$ - Aluminum fluoride 8. $\text{Fe}(\text{OH})_2$ - Iron (II) hydroxide 9. $\text{Cu}(\text{NO}_3)_2$ - Copper (II) nitrate 10. $\text{Ba}(\text{ClO}_4)_2$ – Barium perchlorate 11. $\text{Li}_3\text{PO}_4$ – Lithium phosphate 12. $\text{Hg}_2\text{S}$ – Mercury (I) sulfide 13. $\text{Cr}_2(\text{CO}_3)_3$ – Chromium (III) carbonate 14. $\text{K}_2\text{CrO}_4$ – Potassium Chromate 15. $(\text{NH}_4)_2\text{SO}_4$ – Ammonium sulfate 16. $\text{Ca}(\text{C}_2\text{H}_3\text{O}_2)_2$ – Calcium acetate	17. Potassium sulfide - $\text{K}_2\text{S}$ 18. Calcium carbonate - $\text{CaCO}_3$ 19. Nickel (II) perchlorate - $\text{Ni}(\text{ClO}_4)_2$ 20. Magnesium sulfate - $\text{MgSO}_4$ 21. Silver (I) sulfide - $\text{Ag}_2\text{S}$ 22. Lead (II) nitrate – $\text{Pb}(\text{NO}_3)_2$ 23. Copper (I) oxide – $\text{Cu}_2\text{O}$ 24. Aluminum hydroxide – $\text{Al}(\text{OH})_3$ 25. Cesium fluoride - $\text{CsF}$ 26. Magnesium iodide - $\text{MgI}_2$ 27. Iron (III) carbonate – $\text{Fe}_2(\text{CO}_3)_3$ 28. Sodium hypobromite - $\text{NaBrO}$ 29. Cobalt (II) nitrate - $\text{Co}(\text{NO}_3)_2$ 30. Chromium (II) acetate – $\text{Cr}(\text{C}_2\text{H}_3\text{O}_2)_2$ 31. Copper (II) perchlorate - $\text{Cu}(\text{ClO}_4)$ 32. Calcium hydrogen – $\text{Ca}(\text{HCO}_3)_2$

Name these binary molecular compounds:	Give the formula for these molecular compounds:
<p>1. <math>\text{SO}_2</math> - Sulfur dioxide</p> <p>2. <math>\text{PCl}_5</math> - Phosphorus pentachloride</p> <p>3. <math>\text{N}_2\text{O}_3</math> - Dinitrogen trioxide</p> <p>4. <math>\text{SF}_6</math> - Sulfur hexafluoride</p> <p>5. <math>\text{IF}_5</math> Iodine pentafluoride</p> <p>6. <math>\text{XeO}_3</math> Xenon trioxide</p> <p>7. <math>\text{N}_2\text{O}_5</math> Dinitrogen pentoxide</p> <p>8. <math>\text{BF}_3</math> Boron trifluoride</p> <p>9. <math>\text{CCl}_4</math> Carbon tetrachloride</p> <p>10. <math>\text{P}_4\text{O}_6</math> Tetraphosphorus hexoxide</p> <p>11. <math>\text{SiO}_2</math> Silicon dioxide</p> <p>12. <math>\text{O}_2\text{F}_2</math> Dioxide difluoride</p> <p>13. <math>\text{XeF}_6</math> Xenon hexafluoride</p> <p>14. <math>\text{AsCl}_3</math> Arsenic trichloride</p> <p>15. <math>\text{P}_2\text{O}_5</math> Diphosphorus pentoxide</p> <p>16. <math>\text{AsBr}_3</math> Arsenic tribromide</p>	<p>17. Silicon tetrabromide – <math>\text{SiBr}_4</math></p> <p>18. Disulfur dichloride – <math>\text{S}_2\text{Cl}_2</math></p> <p>19. Dinitrogen tetroxide – <math>\text{N}_2\text{O}_4</math></p> <p>20. Tetraphosphorus hexasulfide – <math>\text{P}_4\text{S}_6</math></p> <p>21. Sulfur hexafluoride – <math>\text{SF}_6</math></p> <p>22. Phosphorus tribromide – <math>\text{PBr}_3</math></p> <p>23. Carbon tetraiodide – <math>\text{CI}_4</math></p> <p>24. Dihydrogen monoxide – <math>\text{H}_2\text{O}</math></p> <p>25. Phosphorus triiodide – <math>\text{PI}_3</math></p> <p>26. Iodine monobromide - <math>\text{IBr}</math></p> <p>27. Diboron trioxide – <math>\text{B}_2\text{O}_3</math></p> <p>28. Nitrogen trichloride - <math>\text{NCl}_3</math></p> <p>29. Carbon monoxide - <math>\text{CO}</math></p> <p>30. Silicon tetrachloride - <math>\text{SiCl}_4</math></p> <p>31. Dinitrogen pentoxide – <math>\text{N}_2\text{O}_5</math></p> <p>32. Nitrogen dioxide – <math>\text{NO}_2</math></p>

Name the following acids:	Give Formulas for these acids:
<ol style="list-style-type: none"> <li>1. HCN - <b>Hydrocyanic acid</b></li> <li>2. HNO<sub>3</sub> – <b>Nitric acid</b></li> <li>3. H<sub>2</sub>SO<sub>4</sub> – <b>Sulfuric acid</b></li> <li>4. H<sub>2</sub>SO<sub>3</sub> – <b>Sulfurous acid</b></li> <li>5. HF – <b>Hydrofluoric acid</b></li> <li>6. HBr – <b>Hydrobromic acid</b></li> <li>7. HI - <b>Hydroiodic acid</b></li> <li>8. H<sub>3</sub>PO<sub>4</sub> – <b>Phosphoric acid</b></li> <li>9. HC<sub>2</sub>H<sub>3</sub>O<sub>2</sub> - <b>Acetic acid</b></li> <li>10. HNO<sub>2</sub> – <b>Nitrous acid</b></li> <li>11. HBrO<sub>3</sub> – <b>Bromic acid</b></li> <li>12. HBrO<sub>4</sub> – <b>Perbromic acid</b></li> <li>13. H<sub>2</sub>Se – <b>Hydroselenic acid</b></li> <li>14. H<sub>3</sub>PO<sub>3</sub> – <b>Phosphorous acid</b></li> <li>15. HCl – <b>Hydrochloric acid</b></li> <li>16. H<sub>2</sub>CO<sub>3</sub> – <b>Carbonic acid</b></li> </ol>	<ol style="list-style-type: none"> <li>17. Hypochlorous acid - <b>HClO</b></li> <li>18. Hydroiodic acid - <b>HI</b></li> <li>19. Sulfurous acid - <b>H<sub>2</sub>SO<sub>3</sub></b></li> <li>20. Hydrobromic acid - <b>HBr</b></li> <li>21. Hydrosulfuric acid – <b>H<sub>2</sub>S</b></li> <li>22. Nitrous acid – <b>HNO<sub>2</sub></b></li> <li>23. Perbromic acid – <b>HBrO<sub>4</sub></b></li> <li>24. Acetic acid – <b>HC<sub>2</sub>H<sub>3</sub>O<sub>2</sub></b></li> <li>25. Hydroselenic acid – <b>H<sub>2</sub>Se</b></li> <li>26. Bromous acid – <b>HBrO<sub>2</sub></b></li> <li>27. Hydrofluoric acid - <b>HF</b></li> <li>28. Phosphoric acid – <b>H<sub>3</sub>PO<sub>4</sub></b></li> <li>29. Nitric acid - <b>HNO<sub>3</sub></b></li> <li>30. Hydrocyanic acid - <b>HCN</b></li> <li>31. Sulfuric acid – <b>H<sub>2</sub>SO<sub>4</sub></b></li> <li>32. Carbonic acid – <b>H<sub>2</sub>CO<sub>3</sub></b></li> </ol>
<p><b>NOTE: Problems 11-14 all use ions that are not common. The ion in problem 11, BrO<sub>3</sub><sup>-</sup>, is bromate. The ion in problem 12, BrO<sub>4</sub><sup>-</sup>, is perbromate. The ion in problem 13, Se<sub>2</sub><sup>-</sup>, is selenide, the ion formed by element 34, selenium. The ion in problem 14, PO<sub>3</sub><sup>3-</sup>, is phosphate.</b></p>	