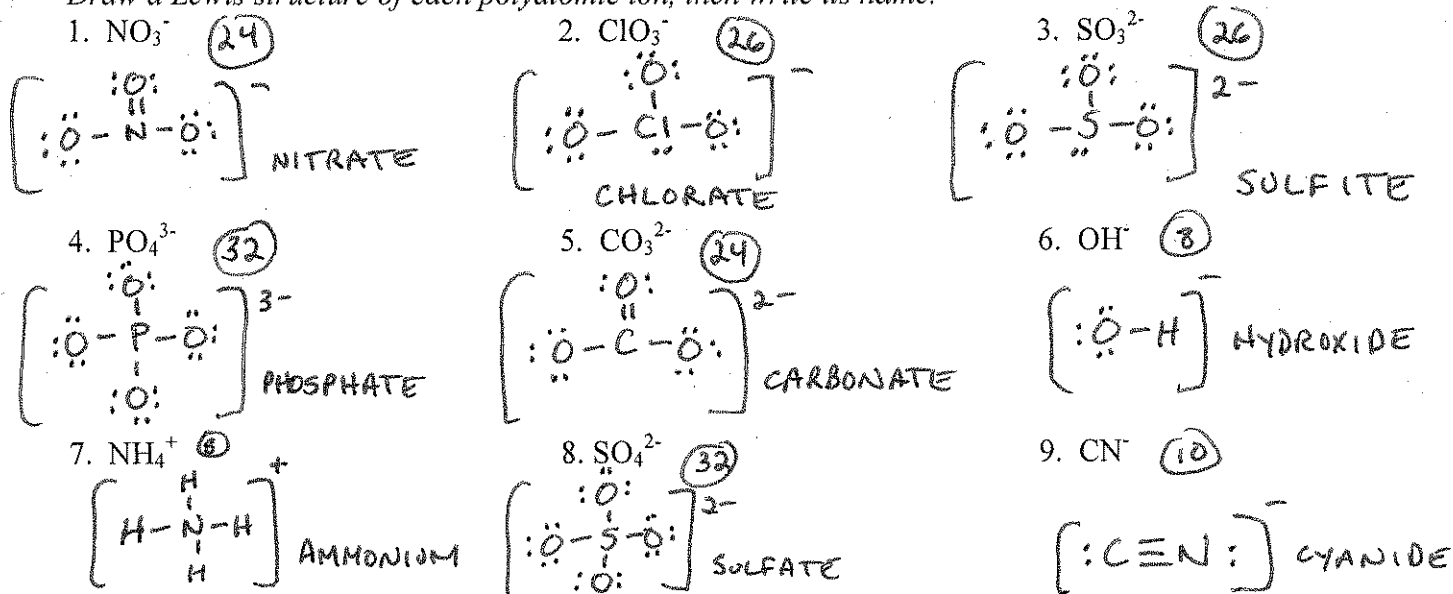


Draw a Lewis structure of each polyatomic ion, then write its name.



Write the formula for the following polyatomic ions.

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| 11. Cyanide <u>CN^-</u> | 16. Perchlorate <u>ClO_4^-</u> |
| 12. Hydrogen carbonate <u>HCO_3^-</u> | 17. Hydrogen sulfate <u>HSO_4^-</u> |
| 13. Chromate <u>CrO_4^{2-}</u> | 18. Phosphite <u>PO_3^{3-}</u> |
| 14. Acetate <u>$\text{C}_2\text{H}_3\text{O}_2^-$</u> | 19. Dihydrogen phosphate <u>H_2PO_4^-</u> |
| 15. Chlorite <u>ClO_2^-</u> | 20. Nitrite <u>NO_2^-</u> |

Write formulas for ionic compounds made from the following ions. Use your ion jigsaw pieces to help determine the correct ratio of ions.

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|---|---|
| 21. Na^+ and PO_4^{3-} <u>Na_3PO_4</u> | 25. Mg^{2+} and OH^- <u>$\text{Mg}(\text{OH})_2$</u> |
| 22. NH_4^+ and Cl^- <u>NH_4Cl</u> | 26. Al^{3+} and ClO_3^- <u>$\text{Al}(\text{ClO}_3)_3$</u> |
| 23. Ca^{2+} and CO_3^{2-} <u>CaCO_3</u> | 27. Zn^{2+} and NO_3^- <u>$\text{Zn}(\text{NO}_3)_2$</u> |
| 24. K^+ and SO_4^{2-} <u>K_2SO_4</u> | 28. Sr^{2+} and NO_3^- <u>$\text{Sr}(\text{NO}_3)_2$</u> |

Write formulas for each ionic compound named below.

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|---|--|
| 31. Sodium hydroxide <u>NaOH</u> | 36. Potassium nitrate <u>KNO_3</u> |
| 32. Iron (II) chloride <u>FeCl_2</u> | 37. Chromium (IV) phosphate <u>$\text{Cr}_3(\text{PO}_4)_4$</u> |
| 33. Lithium carbonate <u>Li_2CO_3</u> | 38. Lead (IV) hydroxide <u>$\text{Pb}(\text{OH})_4$</u> |
| 34. Aluminum sulfate <u>$\text{Al}_2(\text{SO}_4)_3$</u> | 39. Ammonium hydroxide <u>NH_4OH</u> |
| 35. Magnesium nitrate <u>$\text{Mg}(\text{NO}_3)_2$</u> | 40. Sodium hydrogen carbonate <u>NaHCO_3</u> |

Name each compound from the formula given below

- | | |
|--|---|
| 41. MgCO_3 <u>Magnesium Carbonate</u> | 45. CoC_2O_4 <u>Cobalt(II) oxalate</u> |
| 42. $\text{Ba}(\text{NO}_3)_2$ <u>Barium Nitrate</u> | 46. $\text{K}_2\text{Cr}_2\text{O}_7$ <u>Potassium Dichromate</u> |
| 43. $\text{Sn}(\text{OH})_2$ <u>Tin(II) Hydroxide</u> | 47. $(\text{NH}_4)_2\text{SO}_4$ <u>Ammonium Sulfate</u> |
| 44. $\text{NaC}_2\text{H}_3\text{O}_2$ <u>Sodium Acetate</u> | 48. NaCN <u>Sodium Cyanide</u> |