

Ionic Compounds with Polyatomic Ions

Use with textbook pages 164–165.

You can use the periodic table on page 106 and the list of polyatomic ions on page 164 to help you answer these questions.

1. Complete the following table by providing the correct chemical formula for each compound formed from the ions indicated.

Formulas for Some Ionic Compounds				
	fluoride	hydroxide	carbonate	phosphate
a) sodium				
b) aluminum				
c) copper(II)				
d) manganese(IV)				
e) ammonium				

2. Write the chemical formulas for the following ionic compounds.

- | | |
|-----------------------------|---------------------------------|
| a) barium chlorite _____ | f) copper(I) carbonate _____ |
| b) nickel(II) nitrate _____ | g) chromium(III) sulfite _____ |
| c) potassium chromate _____ | h) calcium phosphite _____ |
| d) lead(IV) phosphate _____ | i) iron(III) acetate _____ |
| e) cadmium peroxide _____ | j) strontium permanganate _____ |

3. Write the names of the following ionic compounds.

- | | |
|---------------------------------------|---|
| a) $V(\text{ClO}_3)_4$ _____ | f) Li_3PO_4 _____ |
| b) $\text{Al}_2(\text{CO}_3)_3$ _____ | g) $\text{Cr}(\text{MnO}_4)_3$ _____ |
| c) $\text{Co}(\text{NO}_2)_2$ _____ | h) $\text{Ag}_2\text{Cr}_2\text{O}_7$ _____ |
| d) $(\text{NH}_4)_2\text{SO}_4$ _____ | i) $\text{Mg}(\text{HCO}_3)_2$ _____ |
| e) $\text{Ti}(\text{CrO}_4)_2$ _____ | j) $\text{Sn}(\text{OH})_4$ _____ |