

Periods
Transition metals
Metalloids
Non-metals
Alkali metals
Alkaline earth metals
Halogens
Noble gases

Trends in the table

Chapter 8

Ionic bonds

Ions (cations and anions)
Monoatomic
polyatomic

Forming an ionic bond

Naming ionic compounds

Writing formulas for ionic compounds

Metallic bonds

Practice problems

Name the following ionic compounds and draw the Lewis dot diagram:

- 1) NH_4Cl ammonium chloride
- 2) $\text{Fe}(\text{NO}_3)_3$ iron (III) nitrate
- 3) TiBr_3 titanium (III) bromide
- 4) Cu_3P copper (I) phosphide
- 5) SnSe_2 tin (IV) selenide
- 6) GaAs gallium arsenide
- 7) $\text{Pb}(\text{SO}_4)_2$ lead (IV) sulfate
- 8) $\text{Be}(\text{HCO}_3)_2$ beryllium bicarbonate
- 9) $\text{Mn}_2(\text{SO}_3)_3$ manganese (III) sulfite
- 10) $\text{Al}(\text{CN})_3$

Write the formulas for the following compounds:

- 11) chromium (VI) phosphate $\text{Cr}(\text{PO}_4)_2$
- 12) vanadium (IV) carbonate $\text{V}(\text{CO}_3)_2$
- 13) tin (II) nitrite $\text{Sn}(\text{NO}_2)_2$
- 14) cobalt (III) oxide Co_2O_3
- 15) titanium (II) acetate $\text{Ti}(\text{C}_2\text{H}_3\text{O}_2)_2$
- 16) vanadium (V) sulfide V_2S_5
- 17) chromium (III) hydroxide $\text{Cr}(\text{OH})_3$
- 18) lithium iodide LiI
- 19) lead (II) nitride Pb_3N_2
- 20) silver bromide AgBr

Chapter 9

Covalent bonds

Forming covalent bonds

Lewis structures

Sigma bonds

Pi bonds

Naming covalent compounds

Naming acids

Molecular structures

Molecular shapes

Polarity

Practice problems

Write the names of the following chemical compounds:

- 1) BBr_3 boron tribromide
- 2) C_2Br_6 dicarbon hexabromide
- 3) IO_2 iodine dioxide
- 4) CH_4 carbon tetrahydride
- 5) N_2O_3 dinitrogen trioxide

Write the formulas of the following chemical compounds:

- 6) tetraphosphorus triselenide P_4Se_3