1. What is the charge on the ion typically formed by each element?
   1. 2- (anion)
   2. 1- (anion)
   3. 1+ (cation)
   4. 3+ (cation)
   5. 2+ (cation)
   6. 2+ (cation)
2. How many electrons does the neutral atom gain or lose when each ion forms?
   1. 3 electrons lost
   2. 3 electrons gained
   3. 1 electron lost
   4. 2 electrons lost
   5. 1 electron gained
   6. 2 electrons gained
3. Name each ion. Identify each as a cation or anion.
   1. Tin (II) ion
   2. Cobalt (III) ion
   3. Bromide ion
   4. Potassium ion
   5. Hydride ion
   6. Manganese (II) ion
4. Write the formulas for the compounds formed from these pairs of ions.
   1. BaCl2
   2. AgI
   3. CaS
   4. KBr
   5. Al2O3
   6. FeO
5. Write the formulas for these binary ionic compounds.
   1. MgO
   2. SnF2
   3. KI
   4. AlCl3
   5. Na2SO4
   6. FeBr3
6. Write the formulas for the compounds formed from these pairs of ions.
   1. (NH4)2SO4
   2. KNO3
   3. Ba(OH)2
   4. Li2CO3
7. Name the following binary ionic compounds.
   1. Manganese (IV) oxide
   2. Lithium nitride
   3. Strontium bromide
   4. Potassium sulfide
   5. Copper (II) chloride
   6. Tin (IV) chloride
8. Write the formulas for the following ternary ionic compounds.
   1. Na3PO4
   2. MgSO4
   3. NaOH
   4. KCN
   5. NH4Cl
   6. K2Cr2O7
9. Name the following compounds.
   1. Sodium cyanide
   2. Iron (III) chloride
   3. Sodium sulfate
   4. Potassium carbonate
   5. Copper (II) hydroxide
   6. Lithium nitrate
10. Name the following molecular compounds.
    1. Phosphorus pentachloride
    2. Carbon tetrachloride
    3. Nitrogen dioxide
    4. Xeon difluoride
    5. Silicon dioxide
    6. Dichlorine heptoxide
11. Write the formulas for these compounds and determine whether they are molecular or ionic compounds.
    1. Al2S3
    2. SnCl2
    3. H2O
    4. MgO
    5. NH4F
    6. NO3
    7. Fe3(PO4)2
    8. SF6
    9. MgCl2
12. Name the following compounds and determine whether they are molecular or ionic compounds.
    1. Potassium phosphate
    2. Aluminum hydroxide
    3. Sodium hydrogen sulfate
    4. Mercury (II) oxide
    5. Dinitrogen pentoxide
    6. Nitrogen tribromide
    7. Phosphorus triiodide
    8. Ammonium sulfate