

1. Which compounds are ionic, **write I**, which compounds are Molecular, **write M**?

a)  $\text{KMnO}_4$  \_\_\_\_\_                      b)  $\text{NaHCO}_3$  \_\_\_\_\_

c)  $\text{TiCl}_4$  \_\_\_\_\_                      d)  $\text{NH}_4\text{Cl}$  \_\_\_\_\_

2. Name the following compounds.

FORMULA	NAME
$\text{Li}_3\text{N}$	
$\text{Hg}_2\text{Cl}_2$	
$\text{N}_2\text{O}_5$	
$\text{NH}_4\text{C}_2\text{H}_3\text{O}_2$	
$\text{Fe}_2(\text{CO}_3)_3$	
$\text{I}_4\text{O}_9$	
$\text{AgCN}$	
$\text{NaH}_2\text{PO}_4$	
$\text{Ba}(\text{IO}_3)_2$	
$\text{KNO}_2$	

3. Write formulas for the compounds given in the table.

NAME	FORMULA
Gold(III) nitrate	
Lead(IV) oxide	
Calcium acetate	
Iron(III) hydroxide	
Mercury(I) bromide	
Aluminum sulfite	
Chromium(III) sulfate	
Tin(II) sulfide	
Carbon tetrabromide	
Magnesium hydrogencarbonate	

**4.** Given that selenium (Se) is similar to sulfur, and that francium (Fr) is similar to sodium, write the formulas for the following compounds.

a) Zinc selenide \_\_\_\_\_

b) Cobalt(II) selenite \_\_\_\_\_

c) Selenium dioxide \_\_\_\_\_

d) Selenium hexafluoride \_\_\_\_\_

e) Francium hydroxide \_\_\_\_\_

f) Hydro selenic acid \_\_\_\_\_

**5.** Give the formula for the following compounds.

**a)** Zinc fluoride trihydrate \_\_\_\_\_

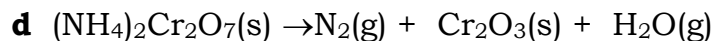
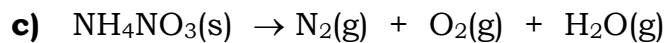
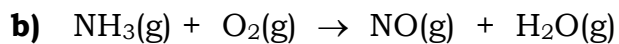
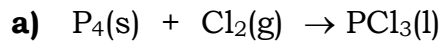
**b)** Copper(II)sulfate pentahydrate \_\_\_\_\_

**6.** Give the name for the following compounds.

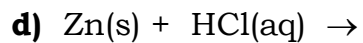
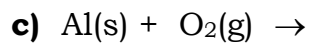
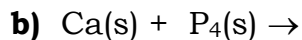
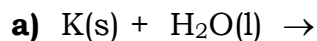
**a)**  $\text{NaC}_2\text{H}_3\text{O}_2 \cdot 3 \text{H}_2\text{O}$  \_\_\_\_\_

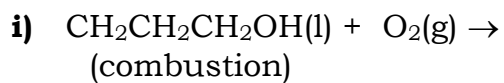
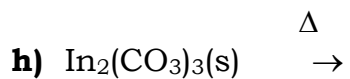
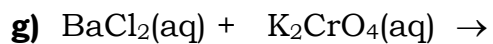
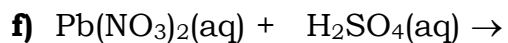
**b)**  $\text{Na}_2\text{CO}_3 \cdot 10 \text{H}_2\text{O}$  \_\_\_\_\_

7. Balance the following equations.



8. Complete and balance the following reactions for which reactants are given. Give **states** of substances. In each case there is a reaction.





**9.** Give the net-ionic equations for the following balanced reactions.

