

## Solubility Rules

Applying solubility rules (from the chart given – you do not have to memorize the rules – just know how to apply the information in the chart), classify each of the following ionic compounds as being soluble (S) or insoluble (I) in water:

- KBr =
- PbCO<sub>3</sub> =
- zinc hydroxide =
- sodium acetate =
- silver iodide =
- zinc carbonate =

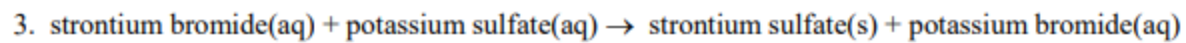
Identify the two new compounds which form if the solutions, as suggested by the following table, were mixed. CIRCLE the names of the compounds which would precipitate from the solutions.

	KBr	Na <sub>2</sub> CO <sub>3</sub>
AgNO <sub>3</sub>		
BaCl <sub>2</sub>		
Al(NO <sub>3</sub> ) <sub>3</sub>		

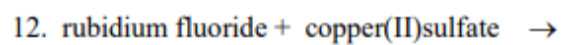
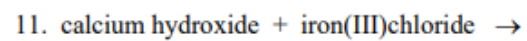
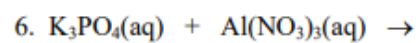
## PRACTICE PROBLEMS ON NET IONIC EQUATIONS

Show the complete ionic and net ionic forms of the following equations. If all species are spectator ions, please indicate that no reaction takes place. Note: you need to make sure the original equation is balanced before proceeding! A set of solubility rules are given at the end of this document.





**Please complete the following reactions, and show the complete ionic and net ionic forms of the equation:**



## Solubility Rules

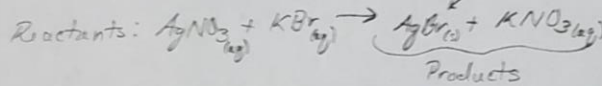
Applying solubility rules (from the chart given - you do not have to memorize the rules - just know how to apply the information in the chart), classify each of the following ionic compounds as being soluble (S) or insoluble (I) in water:

- a.  $KBr = S$
- b.  $PbCO_3 = I$
- c. zinc hydroxide =  $I$
- d. sodium acetate =  $S$
- e. silver iodide =  $I$
- f. zinc carbonate =  $I$

Identify the two new compounds which form if the solutions, as suggested by the following table, were mixed. CIRCLE the names of the compounds which would precipitate from the solutions.

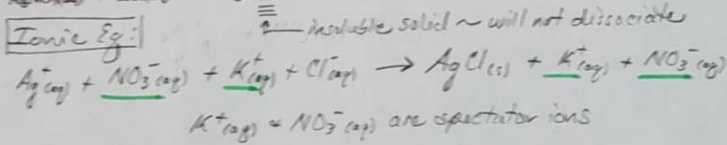
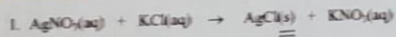
	KBr	$Na_2CO_3$
$AgNO_3$	$AgBr$ , $KNO_3$	$NaNO_3$ , $Ag_2CO_3$
$BaCl_2$	$BaBr_2$ , $KCl$	$BaCO_3$ , $NaCl$
$Al(NO_3)_3$	$AlBr_3$ , $KNO_3$	$Al_2(CO_3)_3$ , $NaNO_3$

⊕ Double Replacement Rxns

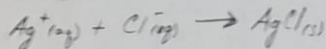


## PRACTICE PROBLEMS ON NET IONIC EQUATIONS

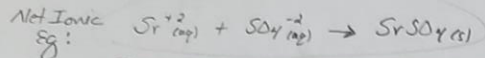
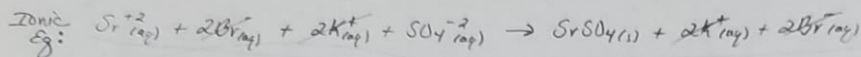
Show the complete ionic and net ionic forms of the following equations. If all species are spectator ions, please indicate that no reaction takes place. Note: you need to make sure the original equation is balanced before proceeding. A set of solubility rules are given at the end of this document.



Net Ionic Eq:

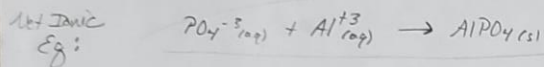
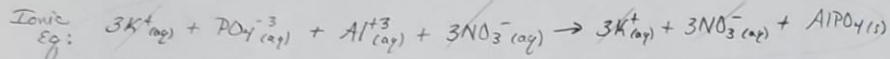
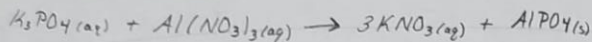


3. strontium bromide(aq) + potassium sulfate(aq) → strontium sulfate(s) + potassium bromide(aq)



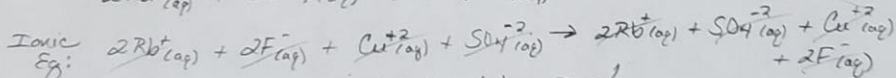
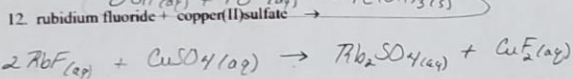
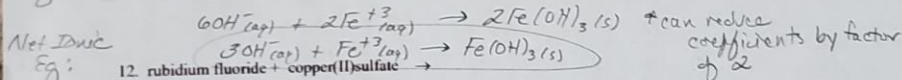
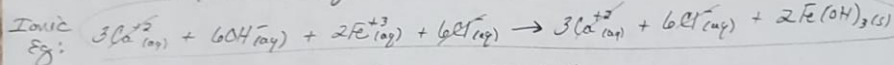
Please complete the following reactions, and show the complete ionic and net ionic forms of the equation:

6.  $\text{K}_3\text{PO}_4(\text{aq}) + \text{Al}(\text{NO}_3)_3(\text{aq}) \rightarrow$



11. calcium hydroxide + iron(III)chloride →

(assume beginning reactants are in solution)



All Spectator Ions!  
 ∴ No Net Ionic Equation  
 = No Reaction (NR)  
 + No Chemical Rxn!