

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_



## Chemical Reactions Ws #4: Double Replacement Reactions

For each reaction write the (a) Molecular, (b) Complete Ionic, and (c) Net Ionic Equation.

### 1. $\text{BaCl}_2(\text{aq}) + \text{Na}_2\text{SO}_4(\text{aq}) \rightarrow$

a.	Molecular Equation	$\text{BaCl}_2(\text{aq}) + \text{Na}_2\text{SO}_4(\text{aq}) \rightarrow \text{BaSO}_4(\text{s}) + 2\text{NaCl}(\text{aq})$
b.	Complete Ionic Equation	$\text{Ba}^{2+}(\text{aq}) + 2\text{Cl}^{-}(\text{aq}) + 2\text{Na}^{+}(\text{aq}) + \text{SO}_4^{2-}(\text{aq}) \rightarrow \text{BaSO}_4(\text{s}) + 2\text{Cl}^{-}(\text{aq})$
c.	Net Ionic Equation	$\text{Ba}^{2+}(\text{aq}) + \text{SO}_4^{2-}(\text{aq}) \rightarrow \text{BaSO}_4(\text{s})$

### 2. $\text{Pb}(\text{NO}_3)_2(\text{aq}) + \text{KCl}(\text{aq}) \rightarrow$

a.	Molecular Equation	$\text{Pb}(\text{NO}_3)_2(\text{aq}) + 2\text{KCl}(\text{aq}) \rightarrow \text{PbCl}_2(\text{s}) + 2\text{KNO}_3(\text{aq})$
b.	Complete Ionic Equation	$\text{Pb}^{2+}(\text{aq}) + 2\text{NO}_3^{-}(\text{aq}) + 2\text{K}^{+}(\text{aq}) + 2\text{Cl}^{-}(\text{aq}) \rightarrow \text{PbCl}_2(\text{s}) + 2\text{K}^{+}(\text{aq}) + 2\text{NO}_3^{-}(\text{aq})$
c.	Net Ionic Equation	$\text{Pb}^{2+}(\text{aq}) + 2\text{Cl}^{-}(\text{aq}) \rightarrow \text{PbCl}_2(\text{s})$

### 3. $\text{AgNO}_3(\text{aq}) + \text{Na}_3\text{PO}_4(\text{aq}) \rightarrow$

a.	Molecular Equation	$3\text{AgNO}_3(\text{aq}) + \text{Na}_3\text{PO}_4(\text{aq}) \rightarrow \text{Ag}_3\text{PO}_4(\text{s}) + 3\text{NaNO}_3(\text{aq})$
b.	Complete Ionic Equation	$3\text{Ag}^{+}(\text{aq}) + 3\text{NO}_3^{-}(\text{aq}) + 3\text{Na}^{+}(\text{aq}) + \text{PO}_4^{3-}(\text{aq}) \rightarrow \text{Ag}_3\text{PO}_4(\text{s}) + 3\text{Na}^{+}(\text{aq}) + 3\text{NO}_3^{-}(\text{aq})$
c.	Net Ionic Equation	$3\text{Ag}^{+}(\text{aq}) + \text{PO}_4^{3-}(\text{aq}) \rightarrow \text{Ag}_3\text{PO}_4(\text{s})$

### 4. $\text{NaOH}(\text{aq}) + \text{HCl}(\text{aq}) \rightarrow$

a.	Molecular Equation	$\text{NaOH}(\text{aq}) + \text{HCl}(\text{aq}) \rightarrow \text{H}_2\text{O}(\text{l}) + \text{NaCl}(\text{aq})$
b.	Complete Ionic Equation	$\text{Na}^{+}(\text{aq}) + \text{OH}^{-}(\text{aq}) + \text{H}^{+}(\text{aq}) + \text{Cl}^{-}(\text{aq}) \rightarrow \text{H}_2\text{O}(\text{l}) + \text{Na}^{+}(\text{aq}) + \text{Cl}^{-}(\text{aq})$
c.	Net Ionic Equation	$\text{H}^{+}(\text{aq}) + \text{OH}^{-}(\text{aq}) \rightarrow \text{H}_2\text{O}(\text{l})$

Write the balanced equation and the net ionic equation for each of the following solution mixtures. If neither water or a precipitate forms, write "No Rxn"

#### 5. Ammonium Sulfate and Barium Nitrate



#### 6. Nitric Acid and Potassium Hydroxide



#### 7. Lead(II) Nitrate and sodium chloride



#### 8. Sodium Phosphate and Potassium nitrate



#### 9. Hydrochloric Acid and Barium Hydroxide



#### 10. Copper(II) chloride and Sodium Hydroxide

