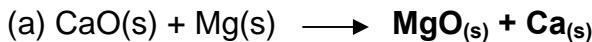
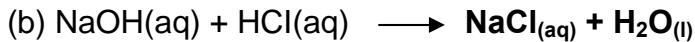


## **Writing Displacement Reactions - ANSWERS**

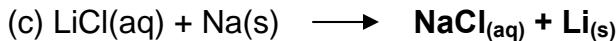
1. Complete each equation by writing the correct products. State whether the reaction is a single or double displacement.



Type of displacement reaction: single displacement



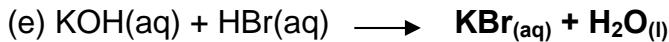
Type of displacement reaction: double displacement



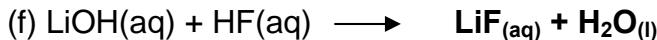
Type of displacement reaction: single displacement



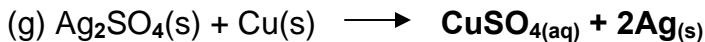
Type of displacement reaction: single displacement



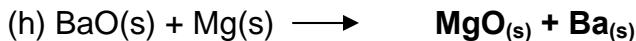
Type of displacement reaction: double displacement



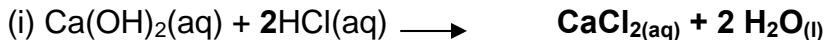
Type of displacement reaction: double displacement



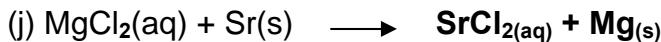
Type of displacement reaction: single displacement



Type of displacement reaction: single displacement



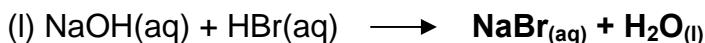
Type of displacement reaction: double displacement



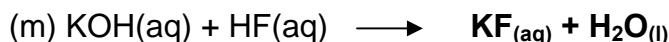
Type of displacement reaction: single displacement



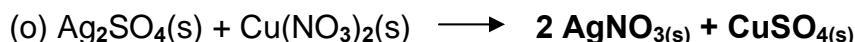
Type of displacement reaction: single displacement



Type of displacement reaction: double displacement



Type of displacement reaction: double displacement



Type of displacement reaction: double displacement

2. Write the chemical equation below the word equation and then balance it. State the type of reaction.

Word Equation	Type of Reaction
Nitrogen plus hydrogen yield nitrogen trihydride. $2 \text{N}_{2(\text{g})} + 3 \text{H}_{2(\text{g})} \rightarrow 2 \text{NH}_{3(\text{g})}$	<b>synthesis</b>
Aluminum bromide plus chlorine yield aluminum chloride and bromine. $2 \text{AlBr}_{3(\text{s})} + 3 \text{Cl}_{2(\text{g})} \rightarrow 2 \text{AlCl}_{3(\text{s})} + 3 \text{Br}_{2(\text{l})}$	<b>Single displacement</b>
Hydrochloric acid (hydrogen chloride) plus sodium hydroxide yield sodium chloride plus water. $\text{HCl}_{(\text{aq})} + \text{NaOH}_{(\text{aq})} \rightarrow \text{NaCl}_{(\text{aq})} + \text{H}_2\text{O}(\text{l})$	<b>Double displacement</b>
Iron plus lead (II) sulfate react forming iron (II) sulfate plus lead. $\text{Fe}_{(\text{s})} + \text{PbSO}_{4(\text{s})} \rightarrow \text{FeSO}_{4(\text{aq})} + \text{Pb}_{(\text{s})}$	<b>Single displacement</b>
Sulfuric acid (hydrogen sulfate) decomposes to form sulfur trioxide gas plus water. $\text{H}_2\text{SO}_{4(\text{aq})} \rightarrow \text{SO}_{3(\text{g})} + \text{H}_2\text{O}(\text{l})$	<b>decomposition</b>
Sodium oxide combines with water to make sodium hydroxide. $\text{Na}_2\text{O}_{(\text{s})} + \text{H}_2\text{O}(\text{l}) \rightarrow 2\text{NaOH}_{(\text{aq})}$	<b>synthesis</b>
Potassium iodide reacts with bromine forming potassium bromide plus iodine. $2 \text{KI}_{(\text{aq})} + \text{Br}_{2(\text{l})} \rightarrow 2 \text{KBr}_{(\text{aq})} + \text{I}_{2(\text{s})}$	<b>Single displacement</b>
Sodium phosphate reacts with calcium nitrate to produce sodium nitrate plus calcium phosphate. $2 \text{Na}_3\text{PO}_{4(\text{aq})} + 3 \text{Ca}(\text{NO}_3)_{2(\text{aq})} \rightarrow 6 \text{NaNO}_{3(\text{aq})} + \text{Ca}_3(\text{PO}_4)_{2(\text{s})}$	<b>Double displacement</b>