

## IDENTIFYING DOUBLE REPLACEMENT REACTIONS

Eight equations are listed below. Some are double replacement reactions. Some are not. Mark a check (✓) in the correct box next to each equation.

	Equation	Double replacement reaction	Not a double replacement reaction
1.	$\text{Mg}(\text{OH})_2 + 2\text{HCl} \longrightarrow \text{MgCl}_2 + 2\text{HOH}$		
2.	$\text{C}_6\text{H}_{10}\text{O}_5 + \text{H}_2\text{O} \longrightarrow \text{C}_6\text{H}_{12}\text{O}_6$		
3.	$\text{Na}_2\text{SO}_4 + \text{BaCl}_2 \longrightarrow 2\text{NaCl} + \text{BaSO}_4$		
4.	$3\text{Mg} + \text{N}_2 \longrightarrow \text{Mg}_3\text{N}_2$		
5.	$\text{H}_2\text{SO}_4 + \text{BaCl}_2 \longrightarrow 2\text{HCl} + \text{BaSO}_4$		
6.	$\text{ZnCO}_3 \longrightarrow \text{ZnO} + \text{CO}_2$		
7.	$\text{CuSO}_4 + \text{H}_2\text{S} \longrightarrow \text{H}_2\text{SO}_4 + \text{CuS}$		
8.	$\text{NH}_4\text{NO}_3 \longrightarrow 2\text{H}_2\text{O} + \text{N}_2\text{O}$		

## IDENTIFYING CHEMICAL REACTIONS

Ten chemical equations are listed below. Identify each kind of reaction: synthesis, decomposition, single replacement, or double replacement.

	Equation	Kind of reaction
1.	$\text{N}_2 + 3\text{H}_2 \longrightarrow 2\text{NH}_3$	
2.	$2\text{Br}_2 + 2\text{H}_2\text{O} \longrightarrow 4\text{HBr} + \text{O}_2$	
3.	$\text{Mg} + 2\text{HCl} \longrightarrow \text{MgCl}_2 + \text{H}_2$	
4.	$2\text{KBr} + \text{H}_2\text{SO}_4 \longrightarrow \text{K}_2\text{SO}_4 + 2\text{HBr}$	
5.	$\text{H}_2\text{SO}_3 \longrightarrow \text{H}_2\text{O} + \text{SO}_2$	
6.	$\text{Na}_2\text{S} + 2\text{HCl} \longrightarrow 2\text{NaCl} + \text{H}_2\text{S}$	
7.	$2\text{Na} + \text{I}_2 \longrightarrow 2\text{NaI}$	
8.	$\text{NaCl} + \text{AgNO}_3 \longrightarrow \text{NaNO}_3 + \text{AgCl}$	
9.	$\text{H}_2 + \text{Cl}_2 \longrightarrow 2\text{HCl}$	
10.	$\text{H}_2\text{CO}_3 \longrightarrow \text{H}_2\text{O} + \text{CO}_2$	

	Equation	Single replacement reaction	Not a single replacement reaction
1.	$C + 2S \longrightarrow CS_2$		
2.	$H_2O_2 \longrightarrow H_2 + O_2$		
3.	$2Al + 6HCl \longrightarrow 2AlCl_3 + 3H_2$		
4.	$2K + Cl_2 \longrightarrow 2KCl$		
5.	$Zn + PbO \longrightarrow ZnO + Pb$		
6.	$Fe + CuSO_4 \longrightarrow FeSO_4 + Cu$		

Identifying  
single  
replacement,  
decomposition  
+  
synthesis  
reactions

	Equation	Decomposition Reaction	Not a Decomposition Reaction
1.	$CuCl_2 \longrightarrow Cu + Cl_2$		
2.	$3Hf + 2N_2 \longrightarrow Hf_3N_4$		
3.	$Zn + 2HCl \longrightarrow ZnCl_2 + H_2$		
4.	$H_2CO_3 \longrightarrow H_2O + CO_2$		
5.	$2NaOH \longrightarrow 2Na + O_2 + H_2$		
6.	$Fe + S \longrightarrow FeS$		
7.	$CaCO_3 \longrightarrow CaO + CO_2$		
8.	$4P + 5O_2 \longrightarrow 2P_2O_5$		
9.	$C + O_2 \longrightarrow CO_2$		
10.	$Ca(OH)_2 \longrightarrow CaO + H_2O$		

	Equation	A Synthesis Reaction	Not a Synthesis Reaction
1.	$2K + Br_2 \longrightarrow 2KBr$		
2.	$2H_2O \longrightarrow 2H_2 + O_2$		
3.	$NaCl \longrightarrow Na + Cl$		
4.	$4Au + 3O_2 \longrightarrow 2Au_2O_3$		
5.	$2Na + 2HCl \longrightarrow 2NaCl + H_2$		
6.	$Cu + Br_2 \longrightarrow CuBr_2$		
7.	$Zn + S \longrightarrow ZnS$		
8.	$2Na + Br_2 \longrightarrow 2NaBr$		
9.	$2HgO \longrightarrow 2Hg + O_2$		
10.	$2Na + I_2 \longrightarrow 2NaI$		