

Worksheet 11 FORMATION AND DECOMPOSITION REACTIONS

Predict the products and /or balance the following. Indicate the type of reaction as either formation (form.) or decomposition (decomp.) in the space on the right.

Balanced Equation	Reaction Type
1. $__ \text{S}_{8(s)} + __ \text{O}_{2(g)} \rightarrow __ \text{SO}_{2(g)}$	
2. $__ \text{HgO}_{(s)} \rightarrow __ \text{Hg}_{(l)} + __ \text{O}_{2(g)}$	
3. $__ \text{N}_2\text{O}_{5(g)} \rightarrow __ + __$	
4. $__ \text{Al}_{(s)} + __ \text{O}_{2(g)} \rightarrow __$	
5. $__ \text{Na}_2\text{O}_{(s)} \rightarrow __ + __$	
6. $__ \text{Ag}_2\text{O}_{(s)} \rightarrow __ + __$	

B. For each of the following, write balanced chemical equations, and indicate the type of reaction.

Balanced Equation	Reaction Type
1. Lithium reacts with nitrogen from the air. $__ + __ \rightarrow __$	
2. Ammonia is broken down into its elements. $__ \rightarrow __ + __$	
3. Ammonium nitrate decomposes into dinitrogen monoxide and water. $__ \rightarrow __ + __$	
4. Silver tarnishes when exposed to sulfur. $__ + __ \rightarrow __$	

Worksheet 12 SINGLE DISPLACEMENT REACTIONS

Predict the products and write balanced chemical equations for each pair of reactants.

Balanced Equation	
1.	$\text{___Al}_{(s)} + \text{___H}_2\text{SO}_{4(aq)} \rightarrow \text{_____} + \text{_____}$
2.	$\text{___Cl}_{2(g)} + \text{___KI}_{(aq)} \rightarrow \text{_____} + \text{_____}$
3.	$\text{___Cu}_{(s)} + \text{___FeSO}_{4(aq)} \rightarrow \text{_____} + \text{_____}$
4.	$\text{___Li}_{(s)} + \text{___HOH}_{(l)} \rightarrow \text{_____} + \text{_____}$
5.	$\text{___Zn}_{(s)} + \text{___Pb(NO}_3)_2(aq) \rightarrow \text{_____} + \text{_____}$
6.	hydrogen sulfide and silver $\text{_____} + \text{_____} \rightarrow \text{_____} + \text{_____}$
1.	copper and silver sulfate $\text{_____} + \text{_____} \rightarrow \text{_____} + \text{_____}$
2.	fluorine and magnesium bromide $\text{_____} + \text{_____} \rightarrow \text{_____} + \text{_____}$
3.	aluminum and iron(III)oxide $\text{_____} + \text{_____} \rightarrow \text{_____} + \text{_____}$
4.	magnesium and water $\text{_____} + \text{_____} \rightarrow \text{_____} + \text{_____}$