EVIDENCE OF A CHEMICAL REACTION LA	EVIDENCE	OF A	CHEMICAL	REACTION LAI
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Procedure: Put 3-4 drops of each of the following solutions into a well on the reaction tray. Record any evidence of a reaction. If you mix more than two solutions, mix them in the order given and record two observations.

MIX SOLUTIONS 1 & 2	OBSERVATION	MIX SOLUTIONS 10 & 4	OBSERVATION
2 & 3		10 & 11	
4 & 5		1 & 12	
4, 5 & 2		1,3 & 7	
1 & 6		5 & 11	
7 & 8		5, 11 & 2	
5 & 9		10 & 9	
5,9 & 7		2 & 8	
13 & 11		13 & 4	
1, 14 & 7		8,1 & 7	

Part A: Looking for similar changes

Study the observations listed above. Find combinations of solutions that give the same observations. State the observation and the combinations of solutions that gave the same observation. List the combinations of two solutions separately from the combinations of three solutions.

OBSERVATION		COMBINATION OF SOLUTIONS			
A. _					
В					
C. _					
D. _					
E. _					
F. _					
G. _					
н					

The chemical names and formulas of the solutions you mixed to make the preceding observations are:

1. BaCl ₂ – Barium chloride	8. K ₂ CO ₃ – Potassium carbonate
2. H ₂ SO ₄ – Sulfuric acid	9. KOH – Potassium hydroxide
3. Na ₂ CO ₃ – Sodium carbonate	10. FeCl ₃ – Iron (III) chloride
4. NaOH – Sodium hydroxide	11. NH ₄ OH – Ammonium hydroxide
5. Phenolphthalein	12. $(NH_4)_2SO_4$ – Ammonium sulfate
6. Na₂SO₄ − Sodium sulfate	13. CuSO ₄ – Copper (II) sulfate
7. HCl – Hydrochloric acid	14. $(NH_4)_2CO_3$ – Ammonium carbonate

Part B: Finding regularities in chemical reactions

Chemists look for regularities, or uniform observations, in chemical reactions. A large number of similar observations indicate the same of similar reaction – a regularity of a consistency (rule) in nature. In this experiment you can assume that three similar observations of sets of observations show a general rule. For example: from the preceding observations, (4 & 5), (5 & 9), and (5 & 11), you can say that phenolphthalein added to a hydroxide solution turns pink. In the spaces below, state the other five rules or regularities in the preceding reactions and make a general statement about each.

A.	Phenolphthalein added to a hydroxide turns pink	(4 & 5),	(5 & 9), (5	8 11)
В.				
C.				
D.				
Ε.				
F.				

Part C: Unknowns

After you have studied and are familiar with the generalizations you made above, obtain 7 unknowns and identify them as to one of the following:

A. A sulfate E. A carbonate	ydroxide pper compou	D. An iron compour		
Unknown #	Identity			