

Name: ANSWERS

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Class/Lab Period: \_\_\_\_\_

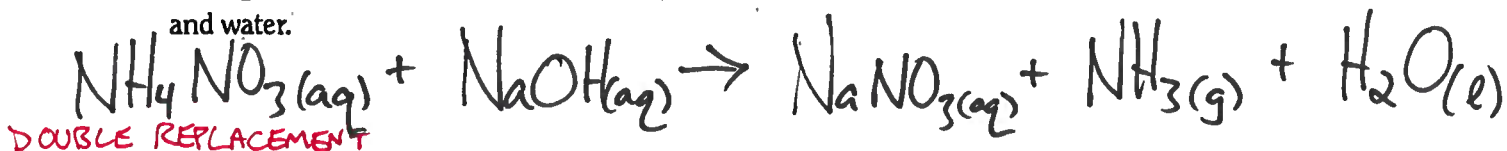
## Classifying Chemical Reactions Worksheet

Write a balanced chemical equation for each reaction and classify the reaction.

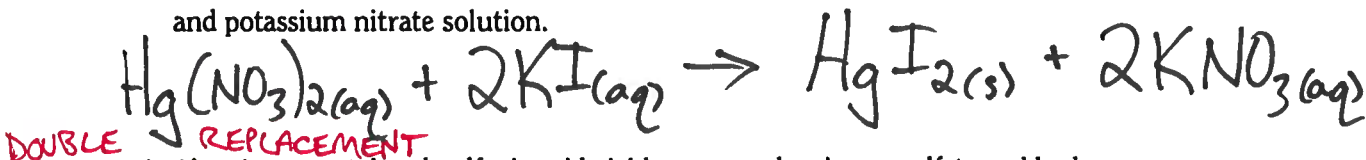
1. Copper metal heated with oxygen gives solid copper(II) oxide.



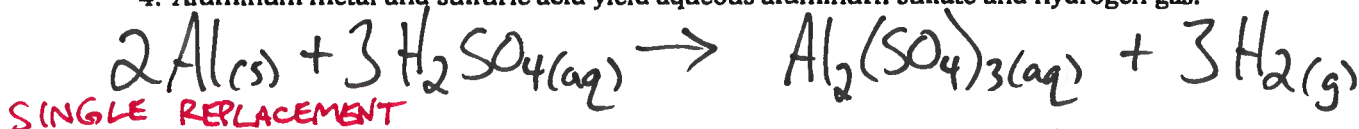
2. Mixing ammonium nitrate and sodium hydroxide solutions gives aqueous sodium nitrate, ammonia gas, and water.



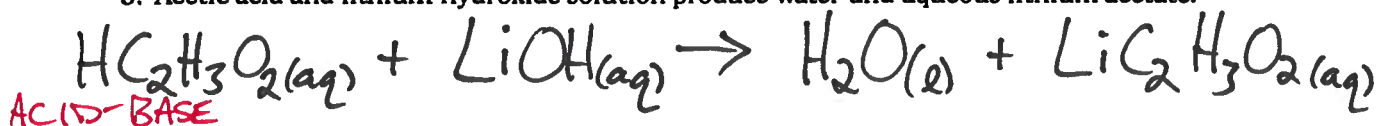
3. Mercury(II) nitrate solution reacts with potassium iodide solution to give a mercury(II) iodide precipitate and potassium nitrate solution.



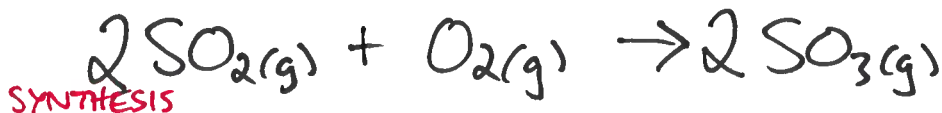
4. Aluminum metal and sulfuric acid yield aqueous aluminum sulfate and hydrogen gas.



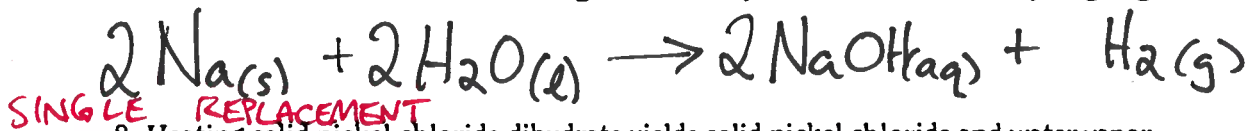
5. Acetic acid and lithium hydroxide solution produce water and aqueous lithium acetate.



6. Sulfur dioxide gas reacts with oxygen on a platinum catalyst surface to produce sulfur trioxide gas.



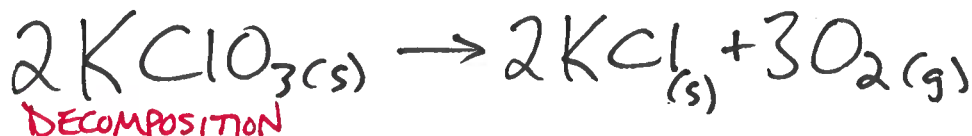
7. Sodium metal reacts with water to give sodium hydroxide solution and hydrogen gas.



8. Heating solid nickel chloride dihydrate yields solid nickel chloride and water vapor.



9. Heating solid potassium chlorate in the presence of manganese dioxide catalyst produces potassium chloride and oxygen gas.



## Post-Lab Questions

1. Write a balanced chemical equation for each reaction #1–8. Classify each reaction using the information provided in the *Background* section (see Table 2).

Reaction #1:

Reaction #2:

Reaction #3:

Reaction #4:

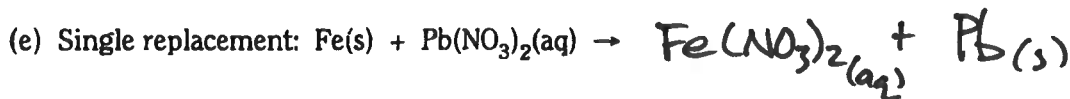
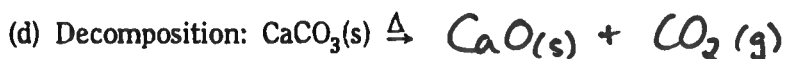
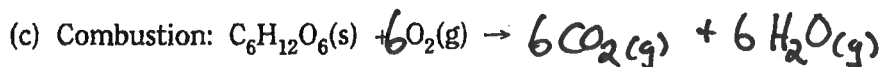
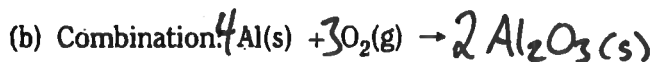
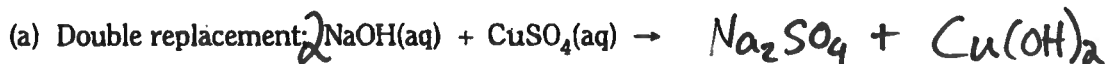
Reaction #5:

Reaction #6:

Reaction #7:

Reaction #8:

2. Classifying chemical reactions helps chemists to predict the possible products that will form when two or more substances are mixed. Complete and balance the following equations by predicting the products of each chemical reaction:



3. (Optional) Complete the "Classifying Chemical Reactions Worksheet."

SEE BACK OF THIS PAGE

(e) ALT. SOLUTION

