

Review for Unit 3 Test - Ch 8
Daigneault Chemistry

Station 1 - GO OVER ALL WORK FROM THE UNIT

1. Go through all of the work listed on the study guide.
 - a. Fill in any portions you did not get to or finish.
 - b. Check all answers on the keys.
 - c. Mark with a star questions you find helpful or would like to go back to and use for review.

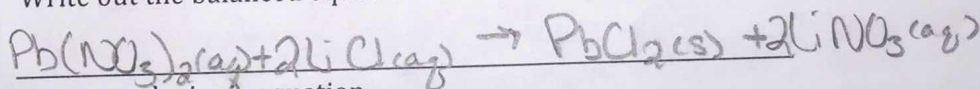
KEY

Station 2 - GO OVER YOUR STUDY GUIDE/ REVISE

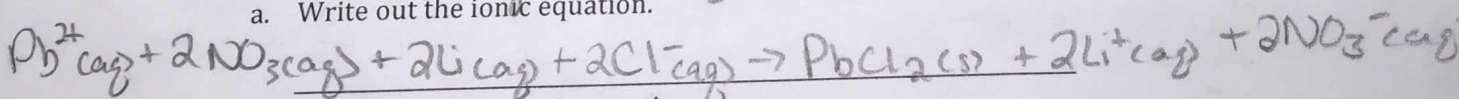
1. Go over your study guide with the members of your group.
 - a. Did you include all of the following sections:
 - i. **Vocabulary section**
Include all bold vocabulary from each section that you need to review as well as any words you do not understand from the unit.
See the end of the chapter review pages for a word bank.
 - ii. **Outline notes section**
From each section we covered write bulleted notes.
Use the end of the chapter review as guidelines for ideas on what to include.
 - iii. **Example section**
Redo at least 2 examples from each of the in class and homework problems assigned. Place them at the end of your study guide or you may reprint the worksheets and attach them to your study guide.
- Complete 1-3 of the blue section review questions at the end of the chapter for the sections you still need to review and check the answers.
- b. Make additions and or edits to your study guide.
 - c. Mark all areas you would like to go back and study for your test.

Station 3 -Precipitation and Acid Base Reactions

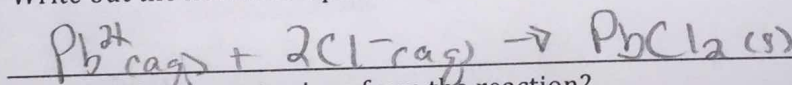
1. Randomly pick one cation and one anion from the pile.
Write the formula NaNO_3 Is this compound soluble? yes ← example
2. Repeat step #1.
Write the formula BaSO_4 Is this compound soluble? No ← example
3. Choose two soluble compounds from the pile that will react to form a precipitate.
 $\text{Pb}(\text{NO}_3)_2(\text{aq})$ + $\text{LiCl}(\text{aq})$ ← example
soluble compound 1 soluble compound 2
4. Complete the following for the reaction above and draw in the boxes below.
 - a. Write out the balanced equation.



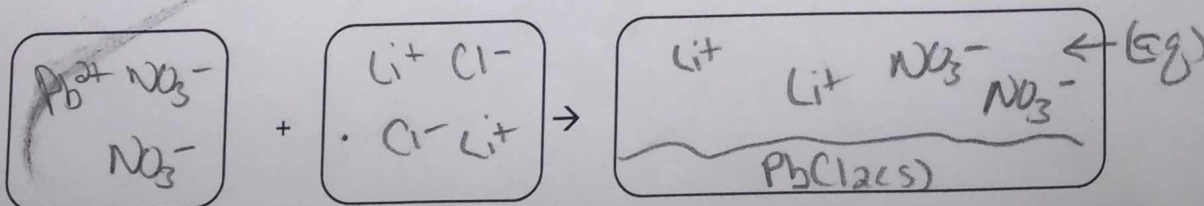
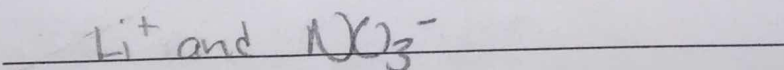
- a. Write out the ionic equation.



- b. Write out the net ionic equation.

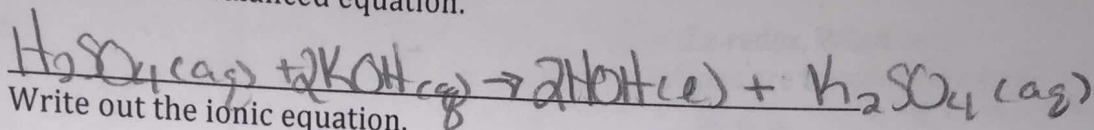


- c. What are the spectator ions from the reaction?

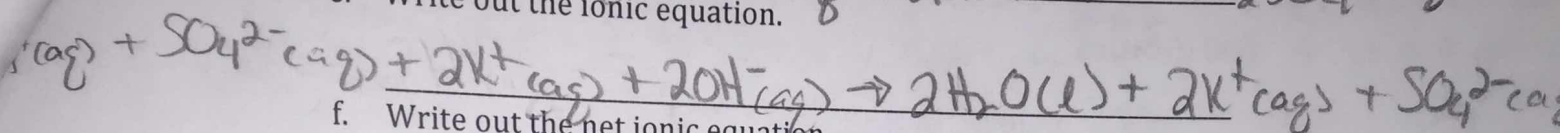


Complete the following and draw in the boxes for the reaction below.
Sulfuric acid reacts with potassium hydroxide to form salt water.

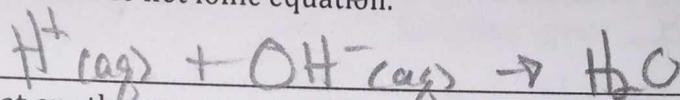
d. Write out the balanced equation.



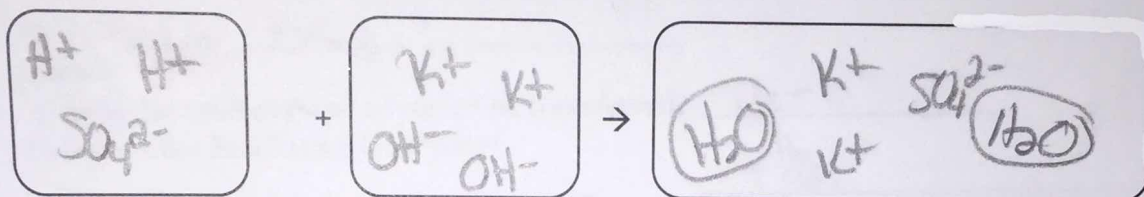
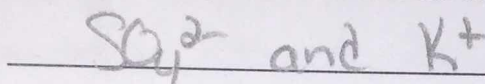
e. Write out the ionic equation.



f. Write out the net ionic equation.



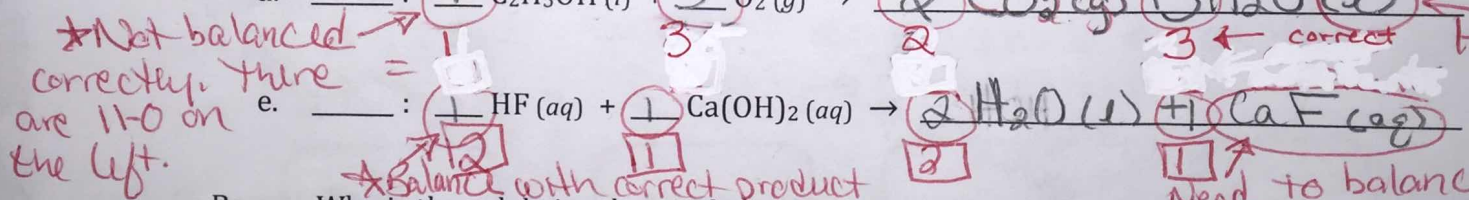
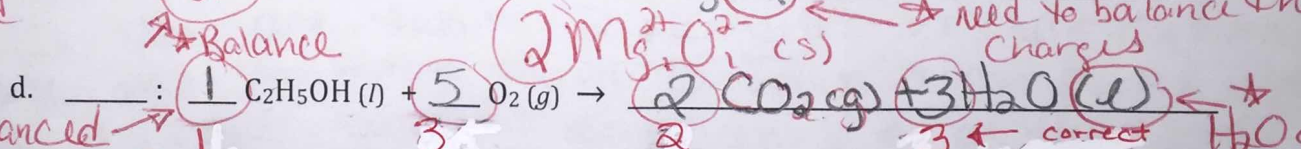
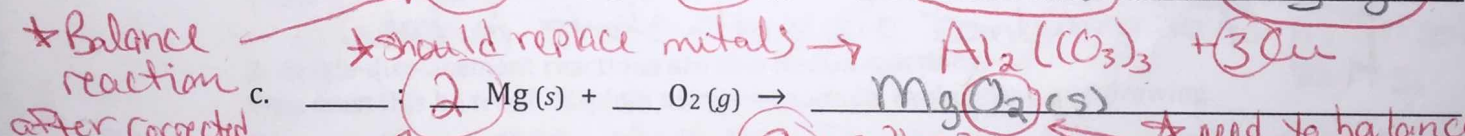
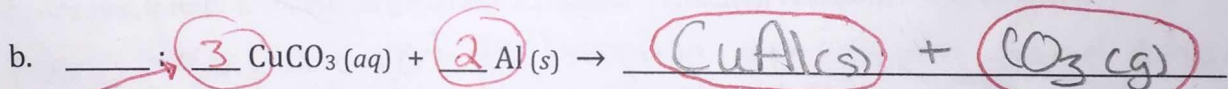
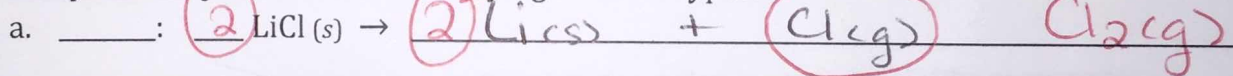
g. What are the spectator ions from the reaction?



Station 4 - Correct my mistakes

One of the best ways to learn is to correct someone else's mistakes. Correct my mistakes below.

1. Complete the products and identifying reaction types.



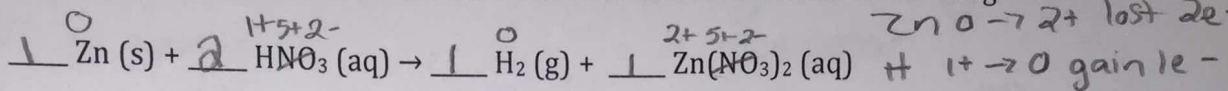
Bonus: Who is the celebrity chemical in Ch 8? Why?

CaCO_3 - Because the dissolution and reaction of the limestone as it goes through the soil forms stalactites and stalagmites in caves

Station 5 - RedOx - Who? - What? - How?

Station 5 - RedOx - Who? - How? - What?

1. In the following redox reaction identify: **Who** is involved in the redox, **What** is the number of electrons that are transferred and **How** are the electrons are transferred using half reactions.



WHO

Element reduced: H GER

Element oxidized: Zn LEO

Oxidizing agent: Zn

Reducing agent: H

HOW

Reduction half-reaction: $2\text{H}^{+1} + 2e^{-} \rightarrow \text{H}_2(\text{g})$

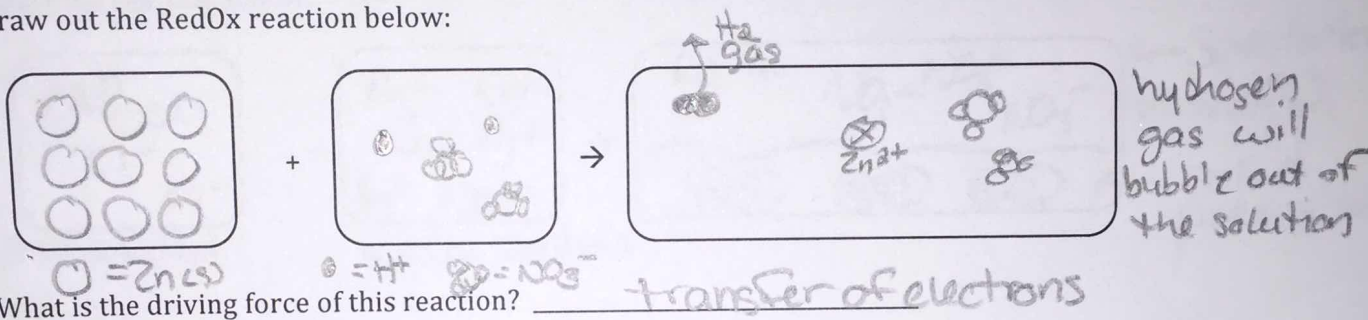
Oxidation half-reaction: $\text{Zn} \rightarrow 2e^{-} + \text{Zn}^{2+}$

Spectator Ions: NO_3^{-}

WHAT

What is the total number of electrons transferred? $2e^{-}$

Draw out the RedOx reaction below:



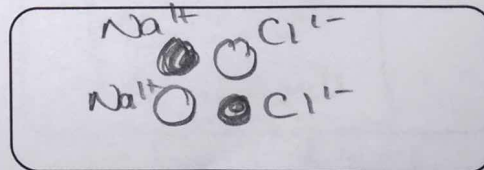
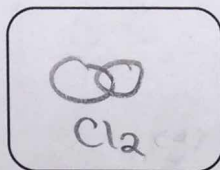
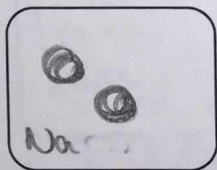
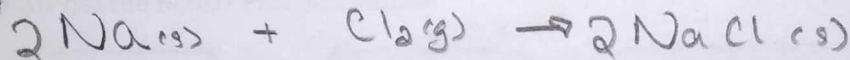
2. Are precipitation reactions generally oxidation-reduction reactions? Why or why not?

No, they are not exchanging electrons and changing oxidation state - they are combining to form insoluble salts.

3. Single-displacement reactions are also RedOx reactions.

Why must this be true? Explain using an example, explanation and drawing.

Because you are taking 2 elements in their natural state and combining them to form a compound where they will either transfer e^{-} or share e^{-} as they bond

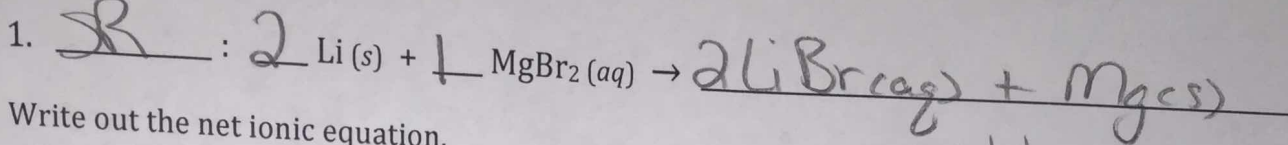


Station 6 - Putting it all together

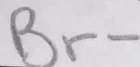
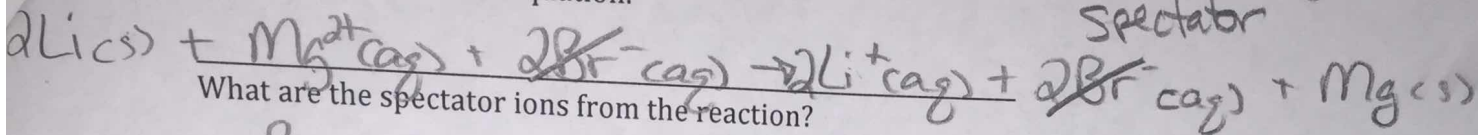
The following examples are from your reaction types worksheets. Complete the extensions for each example.

Write letter code for the type of reaction in the first space, then complete and balance the chemical equation:

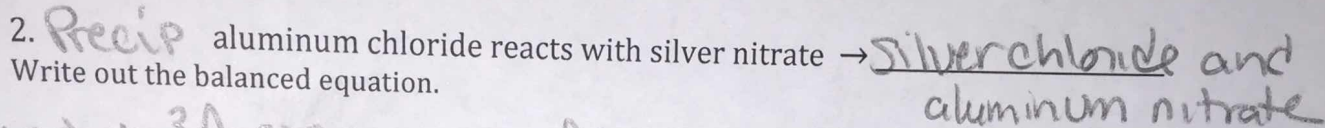
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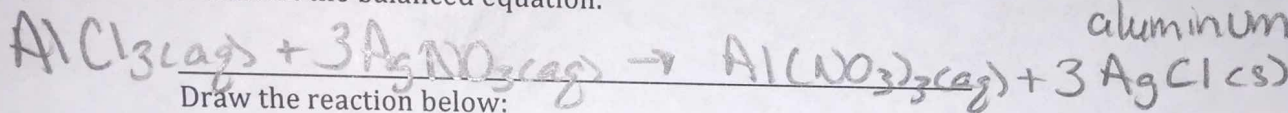
Write out the net ionic equation.



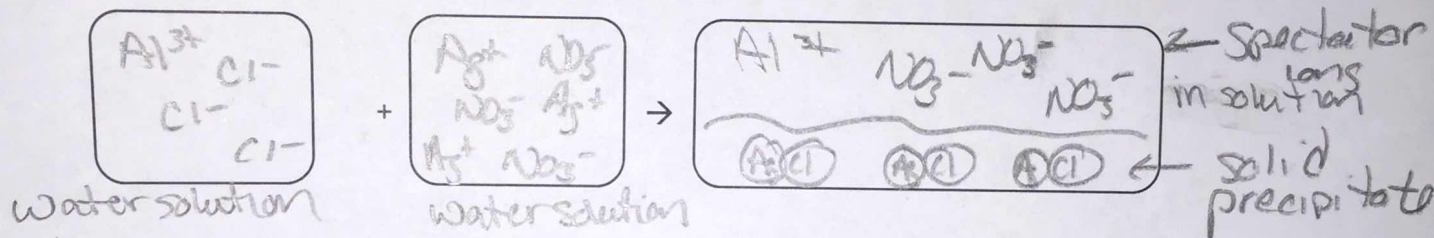
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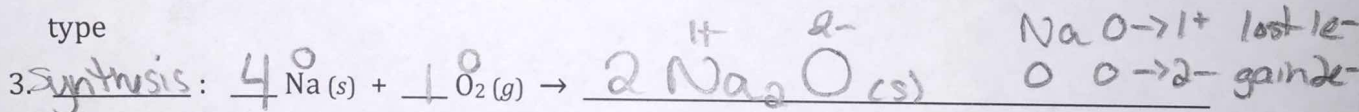
Write out the balanced equation.



Draw the reaction below:



type



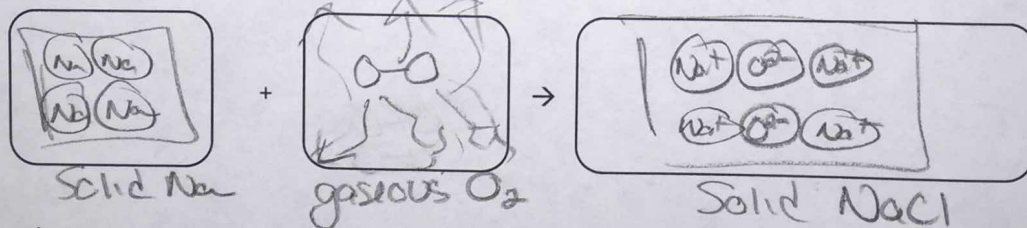
Element reduced: O GER
 Oxidizing agent: Na

Element oxidized: Na LEO
 Reducing agent: O

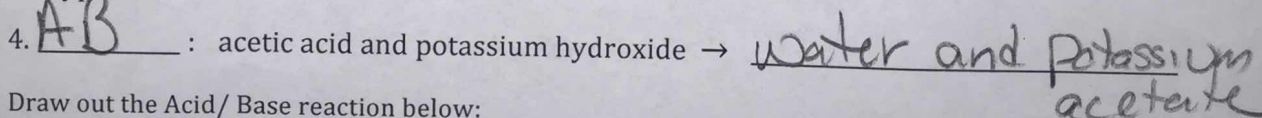
Reduction half-reaction: $\text{O}_2 + 4e^{-} \rightarrow 2 \text{O}^{2-}$

Oxidation half-reaction: $(\text{Na} \rightarrow 1e^{-} + \text{Na}^{+}) \times 2$
 $2 \text{Na} \rightarrow 2e^{-} + 2 \text{Na}^{+}$

Draw out the RedOx reaction below:



type



Draw out the Acid/ Base reaction below:

