

Name: Key
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Chemistry 12
 Solubility Lesson #4
Writing Formula, Complete and Net Ionic Equations

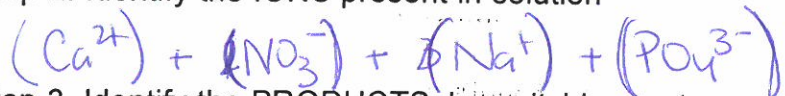
In this unit, every reaction that produces a precipitate will be a DOUBLE REPLACEMENT REACTION! Recall from Chemistry 11 that this is a situation in which the IONS SWITCH PARTNERS!!!

Example 1: Write the reaction occurring when 0.2 M solutions of $\text{Ca}(\text{NO}_3)_2$ and Na_3PO_4 are mixed.

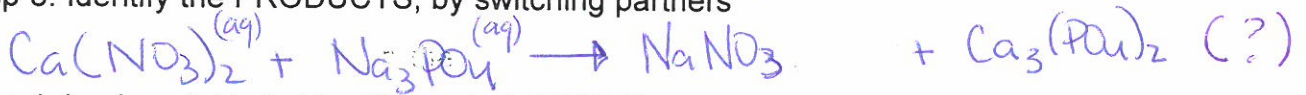
Step 1. Identify the REACTANTS



Step 2. Identify the IONS present in solution



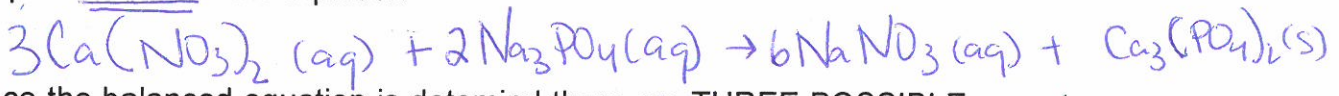
Step 3. Identify the PRODUCTS, by switching partners



Step 4. Look on table to identify product STATES

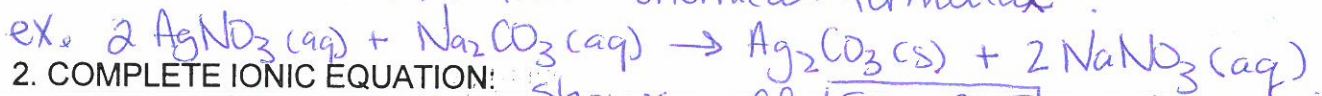


Step 5. BALANCE the equation



Once the balanced equation is determined there are THREE POSSIBLE ways to WRITE THE BALANCED CHEMICAL REACTION

1. FORMULA EQUATION: all reactants and products are written in their chemical formulae.



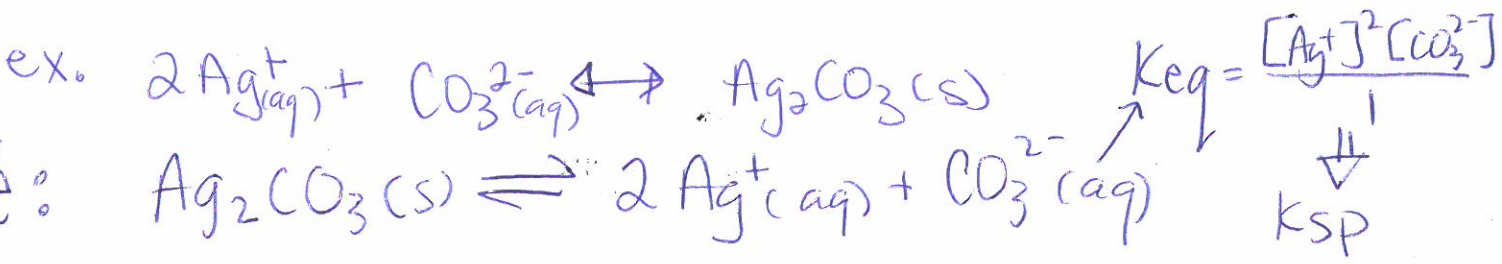
2. COMPLETE IONIC EQUATION:

~~are~~ broken into their respective IONS. Shows all SOLUBLE ionic species.



3. NET IONIC EQUATION:

a reaction in which the same ions on reactant + product side are OMITTED.



*you must write the F.E before C.I.E !

Example 2.

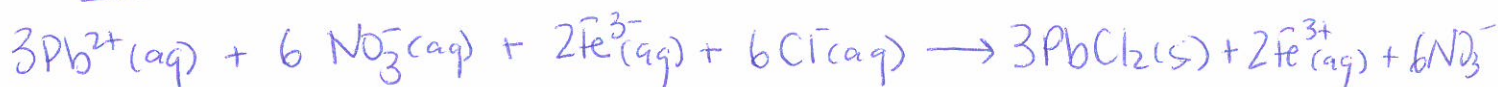
Write a formula equation, complete ionic equation and a net ionic equation for the following reactions in which:

a. 0.2 M $\text{Pb}(\text{NO}_3)_2$ and 0.2 M FeCl_3 are mixed

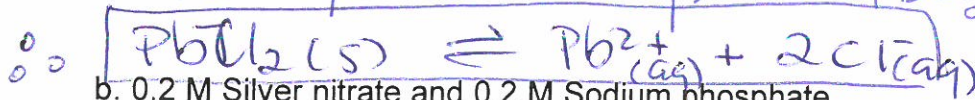
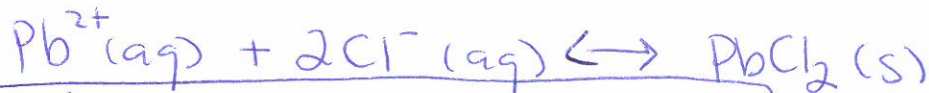
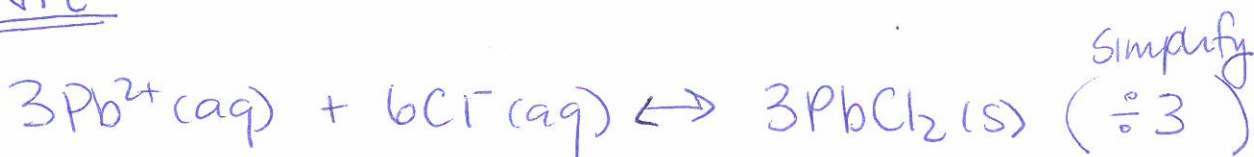
F.E:



C.I.E:



N.I.E

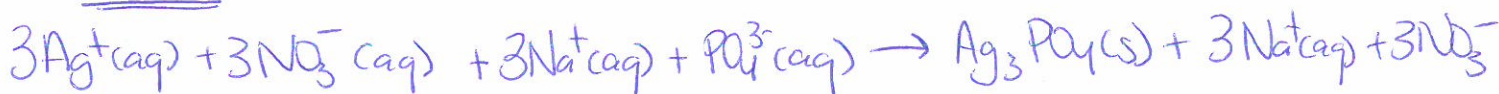


b. 0.2 M Silver nitrate and 0.2 M Sodium phosphate

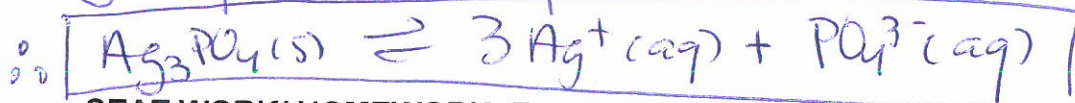
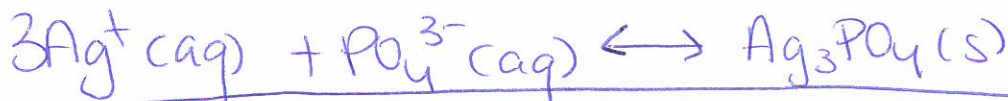
F.E:



C.I.E:



N.I.E



SEAT WORK/ HOMEWORK: Exercise 25 (odd letters only)

PLO's: G7, H1, H2 AND H3