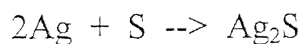
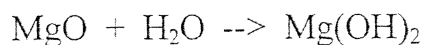
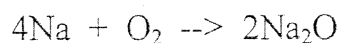
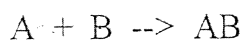
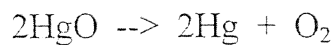
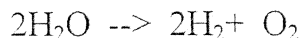
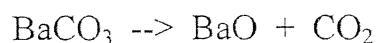
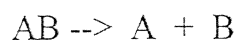


TYPES OF CHEMICAL REACTIONS

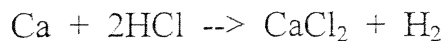
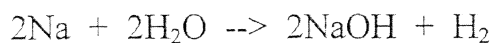
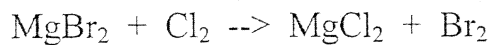
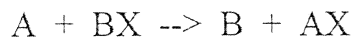
COMPOSITION (SYNTHESIS)



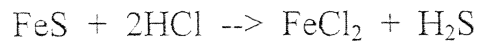
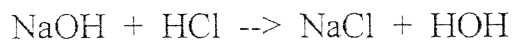
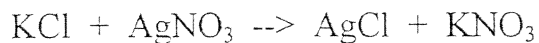
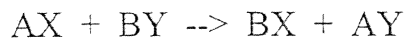
DECOMPOSITION



SINGLE REPLACEMENT



DOUBLE REPLACEMENT



Types of Chemical Reactions

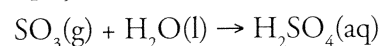
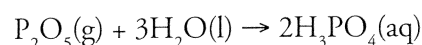
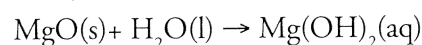
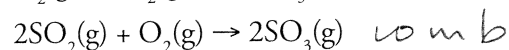
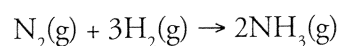
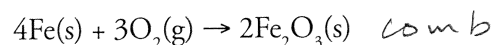
Do atoms rearrange in predictable patterns during chemical reactions?

Why?

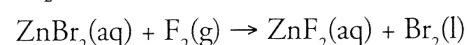
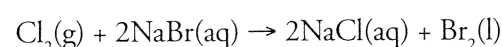
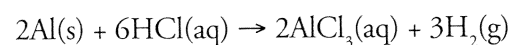
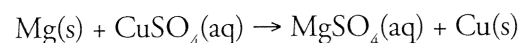
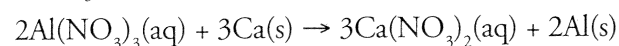
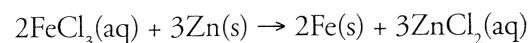
Recognizing patterns allows us to predict future behavior. Weather experts use patterns to predict dangerous storms so people can get their families to safety. Political analysts use patterns to predict election outcomes. Similarly, chemists classify chemical equations according to their patterns to help predict products of unknown but similar chemical reactions.

Model 1 – Types of Reactions

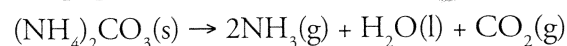
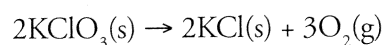
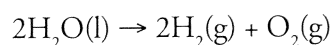
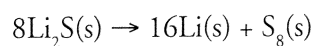
Set A



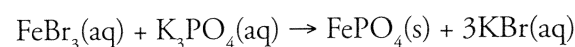
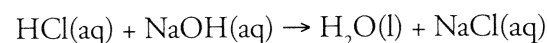
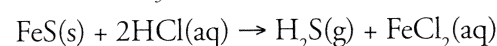
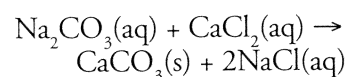
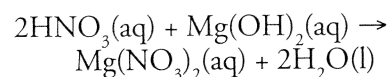
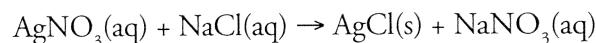
Set C



Set B



Set D

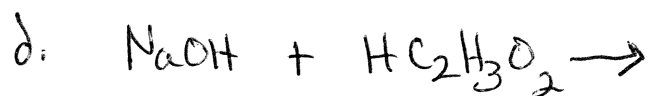
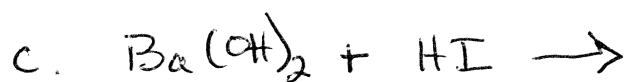
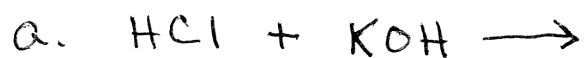


- The chemical equations in Model 1 contain the phase notations (s), (l), (g), and (aq). Match each symbol with its meaning.

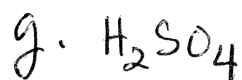
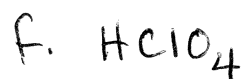
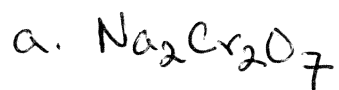
dissolved in water
liquid
solid
gas
- Based on the examples provided, which set(s) of reactions in Model 1 typically involve ions in solution (A, B, C or D)?
- Based on the examples provided, which set(s) of reactions in Model 1 typically involve gases and/or solids?

Do the work in your notebook

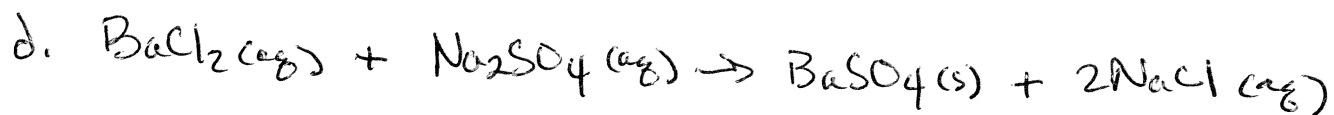
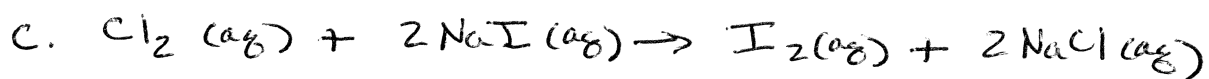
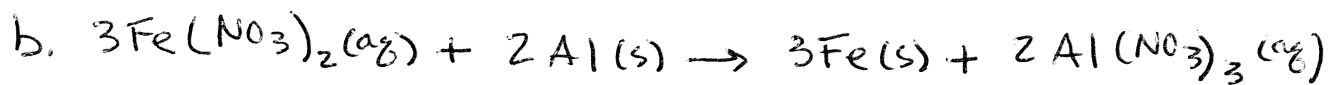
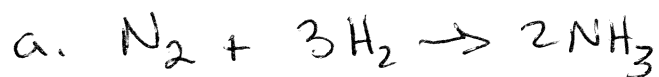
1. Neutralization Rxns: complete the equation, write the complete ionic and net ionic equations.



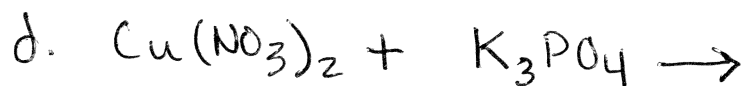
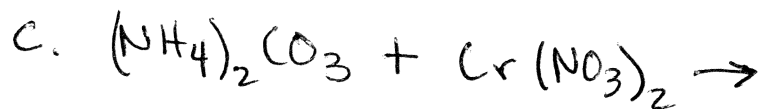
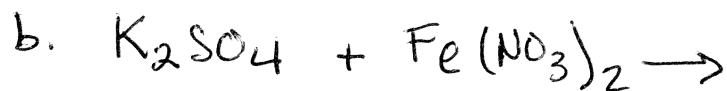
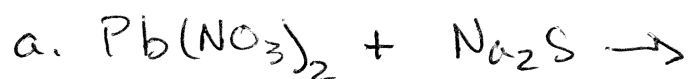
2. Determine the oxidation number of each atom in the compound.



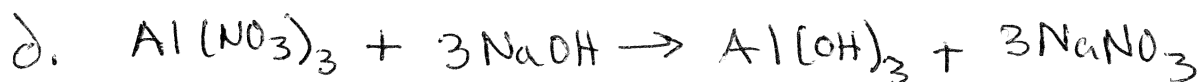
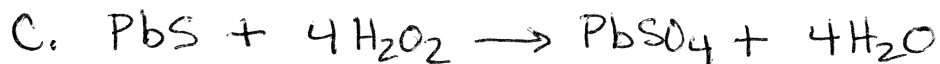
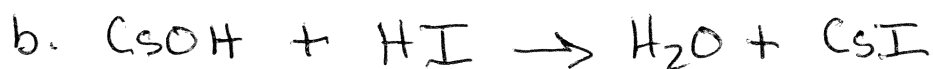
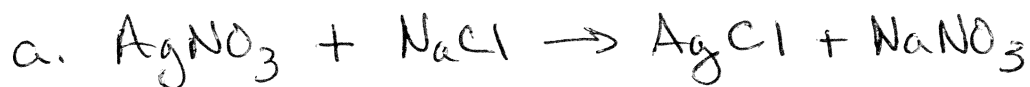
3. Identify which element is oxidized and which is reduced.

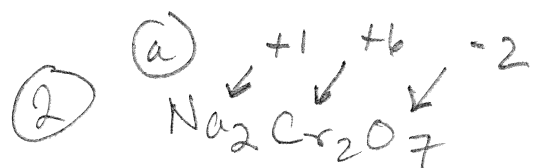
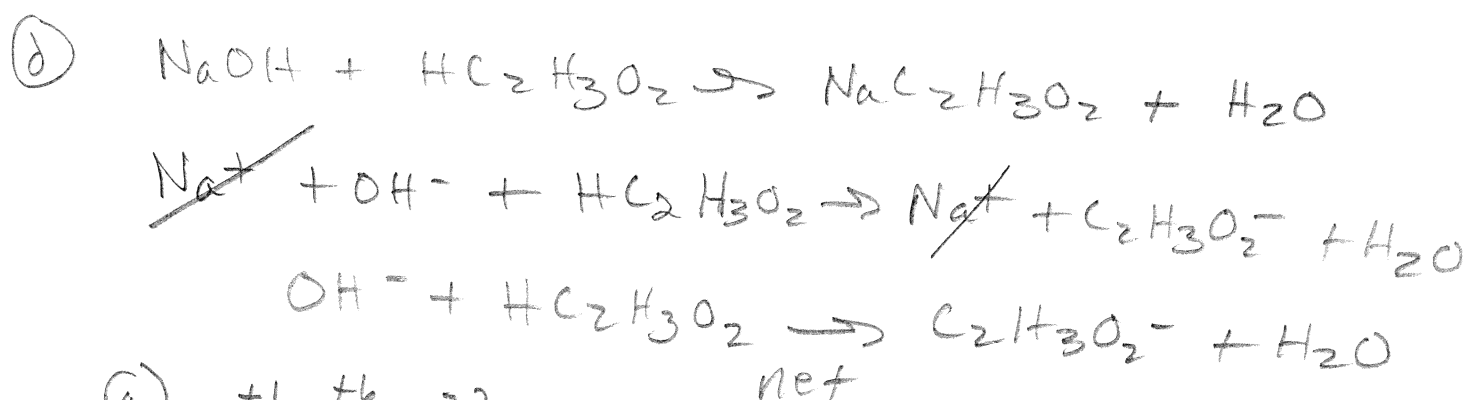
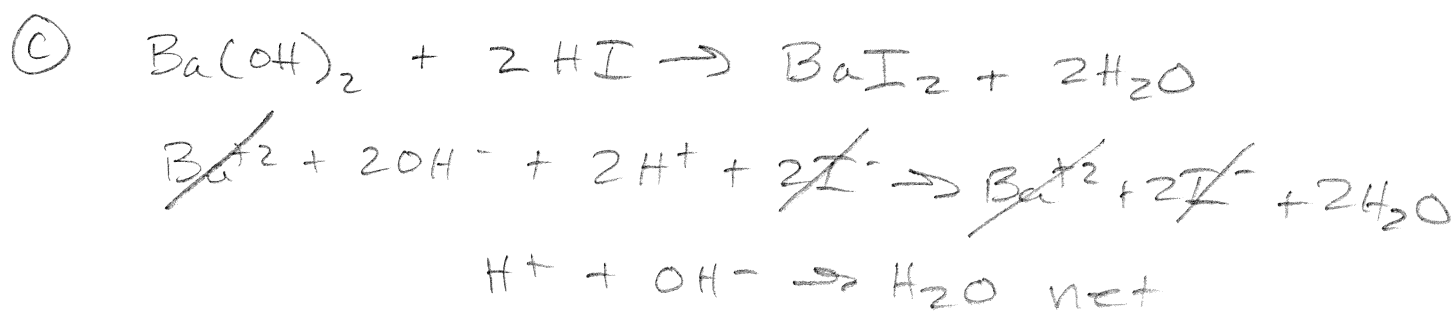
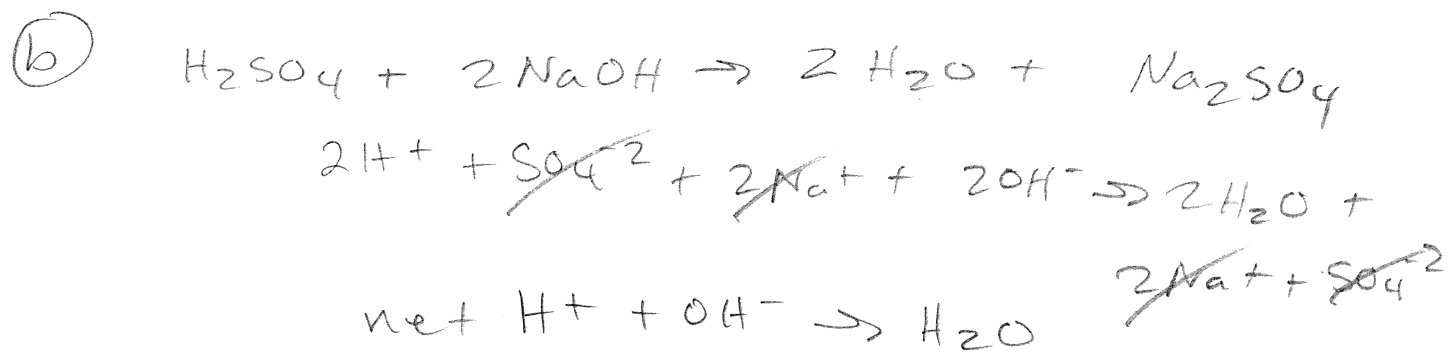
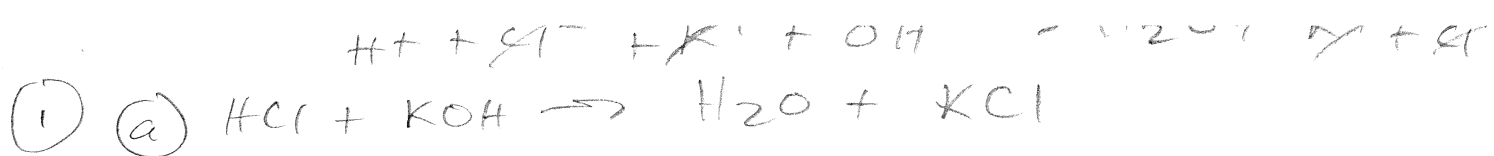


4. Complete, balance, the following precipitation equations. write the net ionic equation.



5. Select the redox rxn:





$$2 + 2\text{Cr} - 14 = 0$$

$$2\text{Cr} - 12 = 0$$

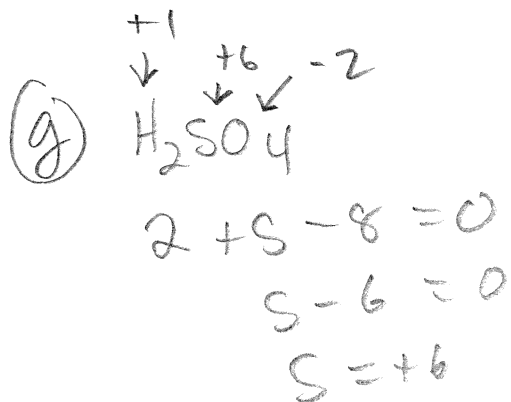
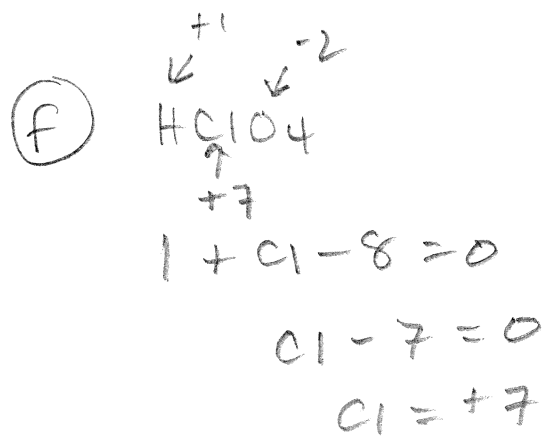
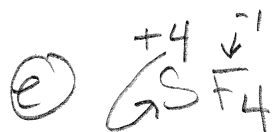
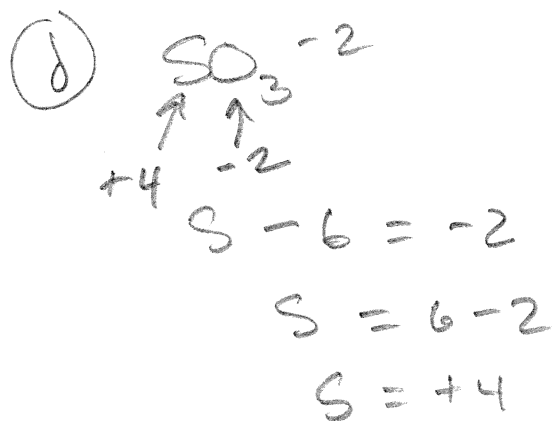
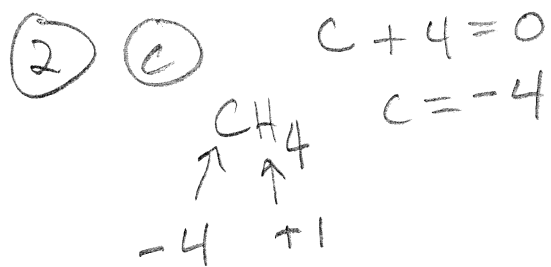
$$\text{Cr} = +6$$

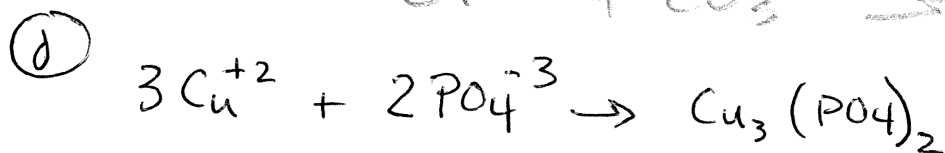
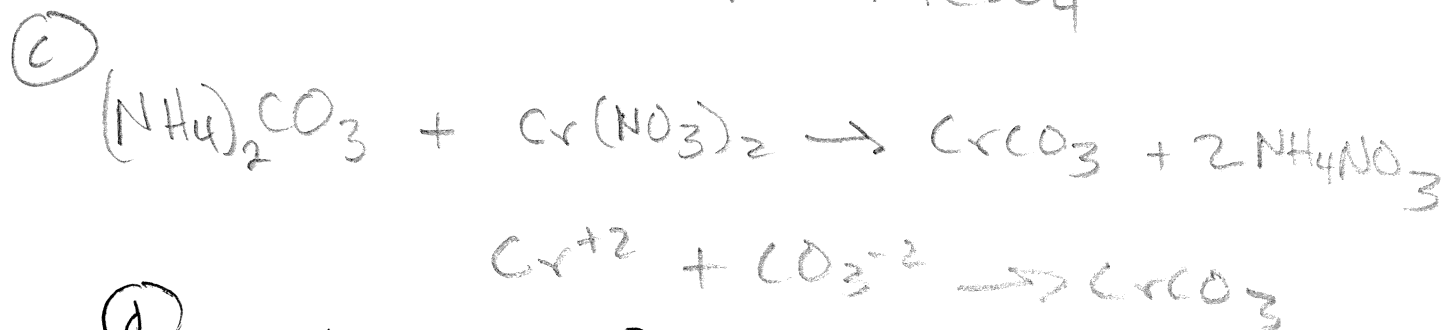
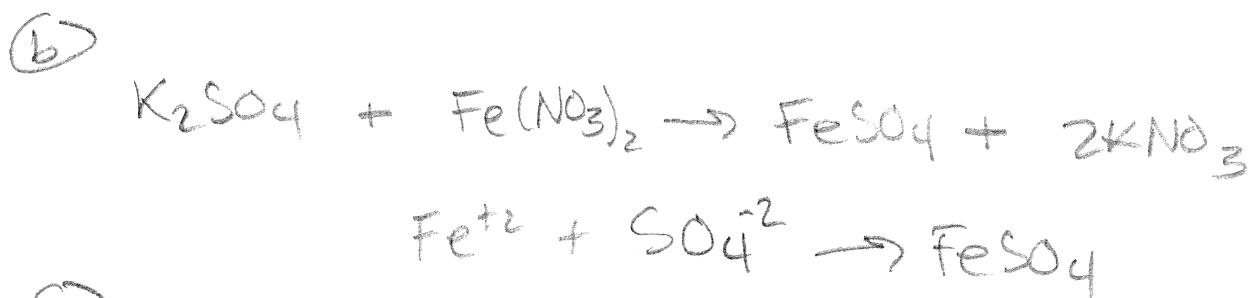
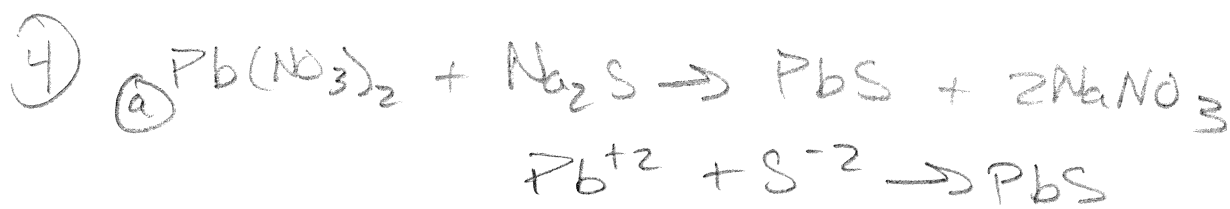
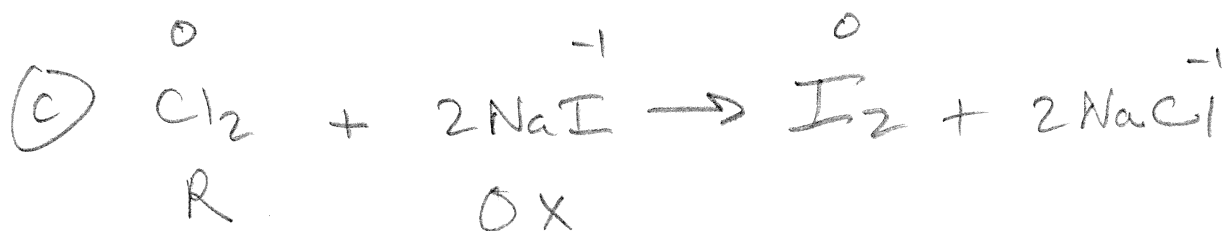
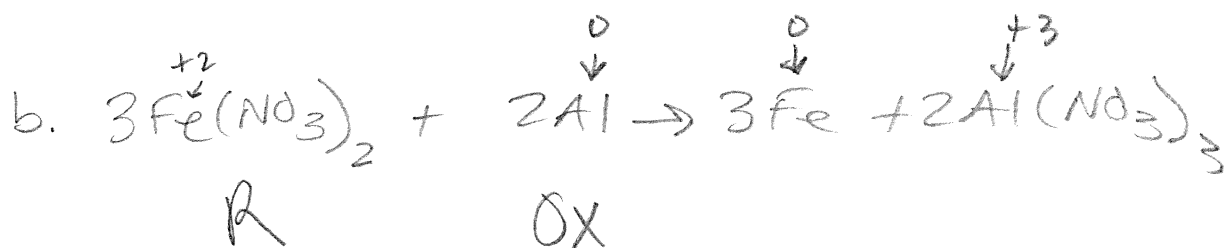
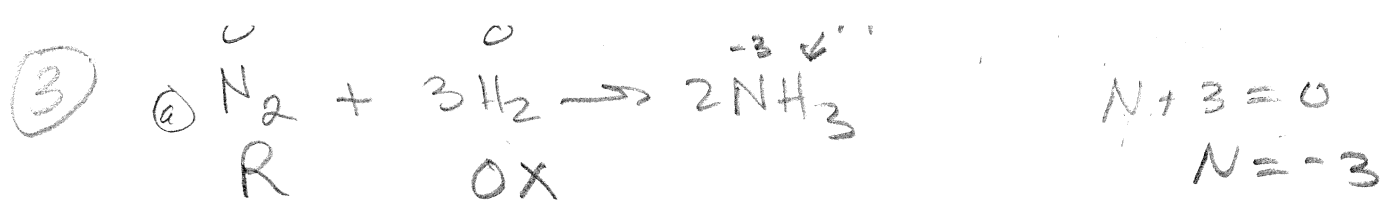


$$2 + \text{Cr} - 8 = 0$$

$$\text{Cr} - 6 = 0$$

$$\text{Cr} = 6$$





5

