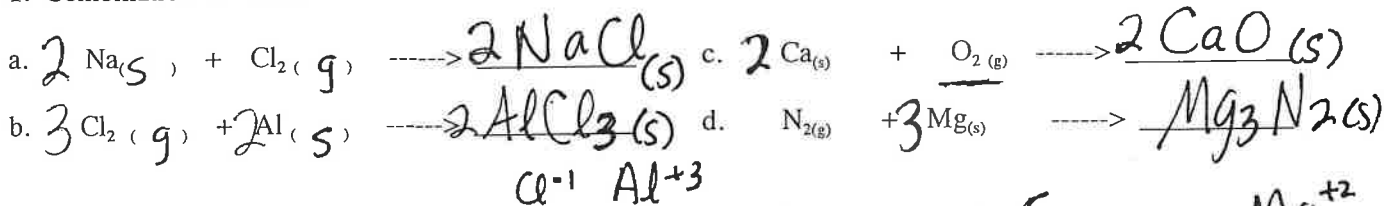


Ca⁺²/O⁻²

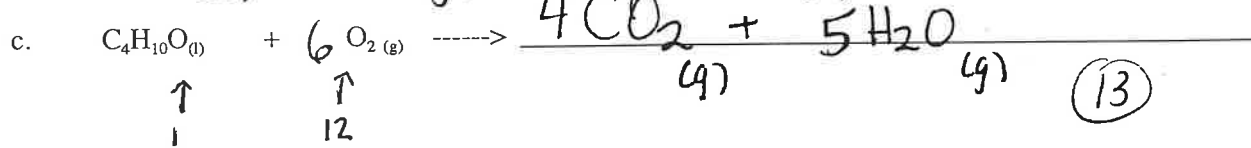
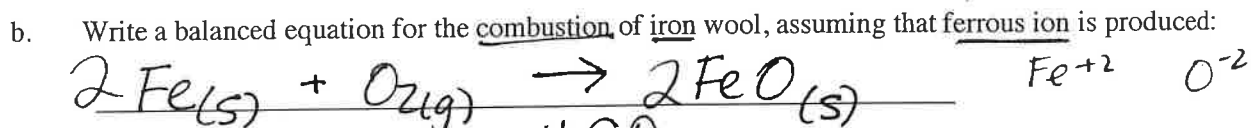
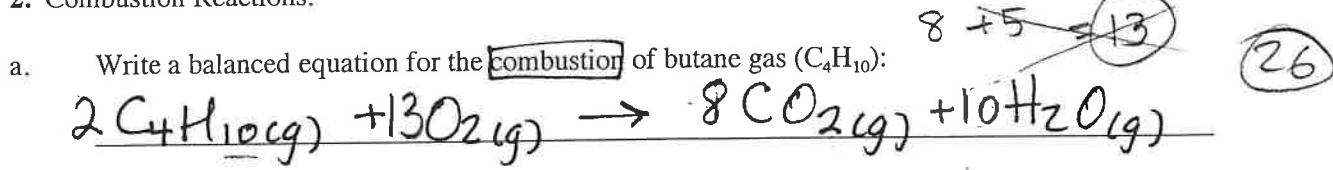
Complete each reaction, balance it, and add phase subscripts.

1. Combination reactions:

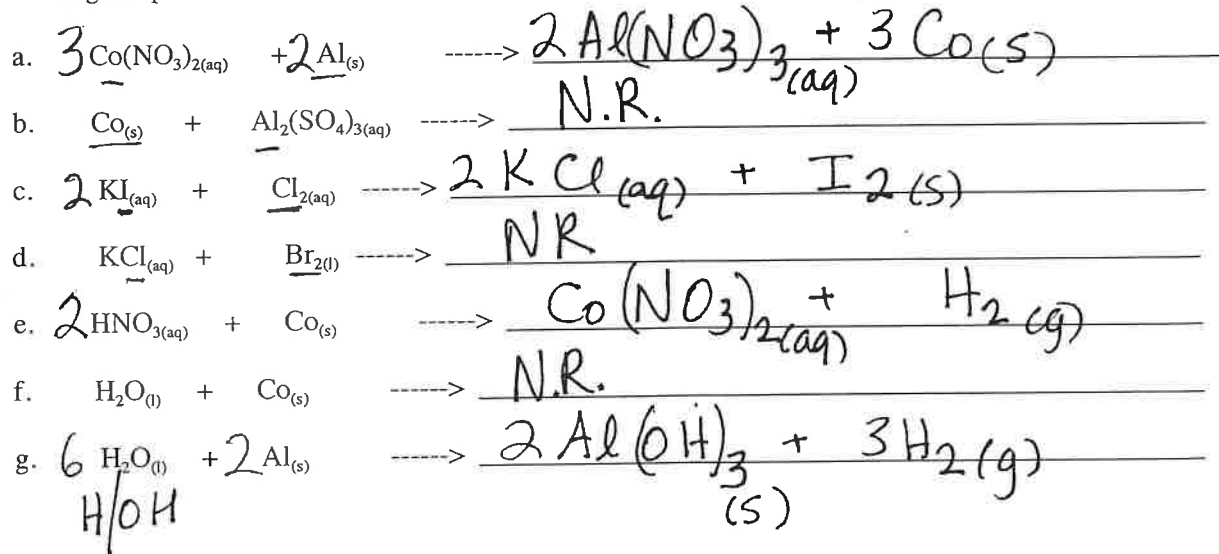


1.5 Which of the above reactions could also be classified as a combustion reaction? c
 (since O₂ was a reactant) Mg⁺² N⁻³

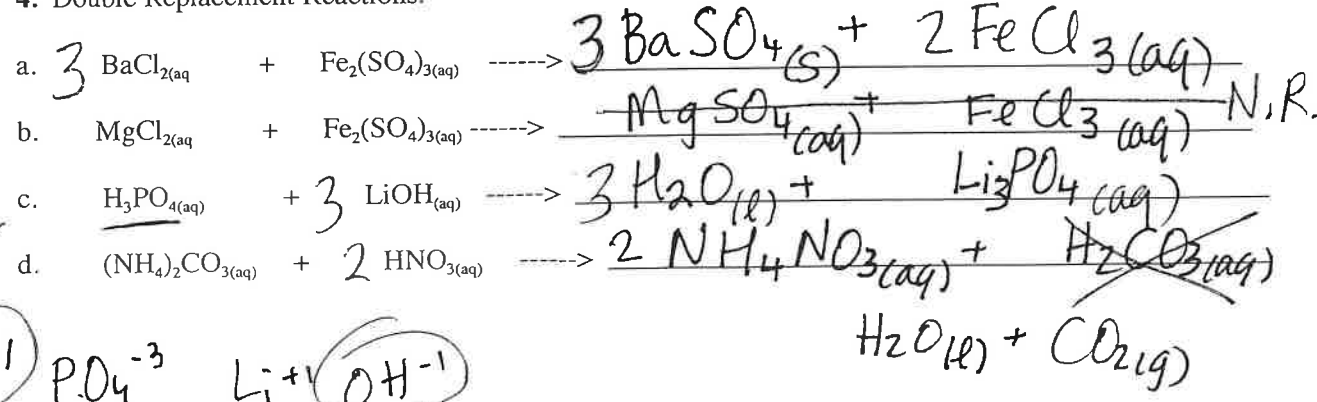
2. Combustion Reactions:



3. Single replacement reactions:



4. Double Replacement Reactions:



Ba⁺²
Cl⁻¹
Fe⁺³
SO₄⁻²

H⁺¹ PO₄⁻³ Li⁺¹ OH⁻¹

5. Mixed Practice! Predict the products for each reaction. 4 are N.R.
Look to the right of each equation to see if you need to balance the equation and/or write phase subscripts.

- a. $6 \text{Li}_{(s)} + \text{N}_{2(g)} \rightarrow 2 \text{Li}_3\text{N}_{(s)}$ *balance + subscripts*
- b. $\text{H}_2\text{SO}_{4(aq)} + \text{Ca}(\text{OH})_{2(aq)} \rightarrow \text{H}_2\text{O} + \text{CaSO}_4$
- c. $\text{Ba}_{(s)} + 2 \text{H}_2\text{O}_{(l)} \rightarrow \text{Ba}(\text{OH})_{2(aq)} + \text{H}_2(g)$ *balance*
 $40 + 16 = 56$
- d. $2 \text{C}_{10}\text{H}_{16}\text{O}_{(l)} + 27 \text{O}_{2(g)} \rightarrow 20 \text{CO}_{2(g)} + 16 \text{H}_2\text{O}_{(g)}$ *balance + subscripts*
- e. $\text{Li}_2\text{CO}_{3(aq)} + 2 \text{HBr}_{(aq)} \rightarrow \text{LiBr}_{(aq)} + \text{H}_2\text{O}_{(l)} + \text{CO}_{2(g)}$ *subscripts*
- f. $\text{Zn}_{(s)} + \text{Pb}(\text{NO}_3)_{4(aq)} \rightarrow \text{Zn}(\text{NO}_3)_2 + \text{Pb}$
- g. $\text{Ag}_{(s)} + \text{H}_2\text{O}_{(l)} \rightarrow \text{N.R.}$
- h. $\text{F}_{2(aq)} + \text{FeCl}_{3(aq)} \rightarrow \text{FeF}_3 + \text{Cl}_2$
- i. $\text{Mg}_{(s)} + \text{FeCl}_{3(aq)} \rightarrow \text{MgCl}_2 + \text{Fe}$
- j. $\text{Cl}_{2(g)} + 2 \text{K}_{(s)} \rightarrow 2 \text{KCl}_{(s)}$ *balance + subscripts*
- k. $\text{Na}_2\text{CO}_{3(aq)} + \text{H}_3\text{PO}_{4(aq)} \rightarrow \text{Na}_3\text{PO}_4 + \text{H}_2\text{O} + \text{CO}_2$
- l. $\text{Na}_2\text{S}_{(aq)} + \text{Pb}(\text{NO}_3)_{4(aq)} \rightarrow \text{PbS}_2 + \text{NaNO}_3$
- m. $\text{HBr}_{(aq)} + \text{Hg}(\text{OH})_{2(s)} \rightarrow \text{H}_2\text{O} + \text{HgBr}_2$
- n. $\text{I}_{2(s)} + \text{FeCl}_{3(aq)} \rightarrow \text{N.R.}$
- o. $\text{KCl}_{(aq)} + \text{Br}_{2(l)} \rightarrow \text{N.R.}$
- p. $\text{O}_{2(g)} + \text{Li}_{(s)} \rightarrow \text{Li}_2\text{O}_{(s)}$ *subscripts*
- q. $\text{Cr}(\text{NO}_3)_{3(aq)} + \text{Zn}_{(s)} \rightarrow \text{Zn}(\text{NO}_3)_2 + \text{Cr}$
- r. $\text{Ag}_2\text{SO}_{4(aq)} + \text{Mg}(\text{NO}_3)_{2(aq)} \rightarrow \text{AgNO}_3(aq) + \text{MgSO}_4(aq)$ *subscripts*
~~NR~~
- s. $\text{C}_{17}\text{H}_{32(l)} + \text{O}_{2(g)} \rightarrow \text{CO}_2(g) + \text{H}_2\text{O}(g)$ *subscripts*
- t. $\text{Cs}_{(s)} + \text{H}_2\text{O}_{(l)} \rightarrow \text{CsOH} + \text{H}_2$
(This rxn will happen. Cs is near the top of the activity series, when included)
- u. $23 \text{O}_{2(g)} + 2 \text{C}_8\text{H}_{14(l)} \rightarrow 16 \text{CO}_2(g) + 14 \text{H}_2\text{O}(g)$ *balance + subscripts*
 $32 + 14 = 46$