

1.7.4.5: Practice Classifying Reactions

Classify Reactions

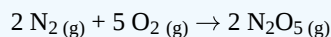
Exercise 1.7.4.5.1

Classify each reaction below as combination, decomposition, single displacement, double displacement, or combustion.



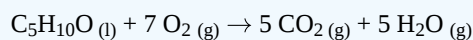
Answer

decomposition



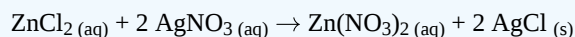
Answer

combination



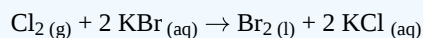
Answer

combustion



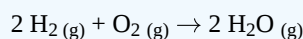
Answer

double displacement



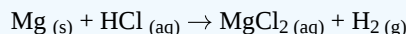
Answer

single displacement



Answer

combination



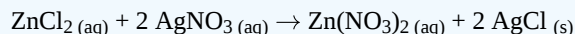
Answer

single displacement

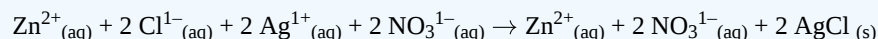
Total Ionic and Net Ionic Equations

Exercise 1.7.4.5.1

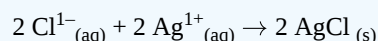
Give the total ionic equation ("complete ionic equation") and the net ionic equation for each reaction below.

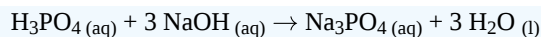


Total Ionic

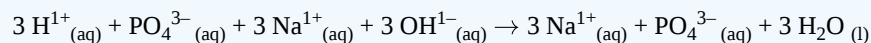


Net Ionic

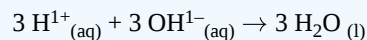




Total Ionic



Net Ionic



Precipitation Reactions

Exercise 1.7.4.5.1

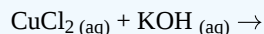
Which of the following compounds would not be soluble in water (and would form a solid precipitate)?

LiCl Pb(NO₃)₂ BaBr₂ CaSO₄ AgBr Zn(C₂H₃O₂)₂ MgSO₄ CaCl₂ K₂CO₃ NiPO₄

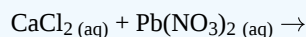
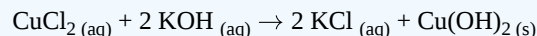
Answer

CaSO₄ AgBr NiPO₄

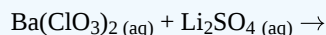
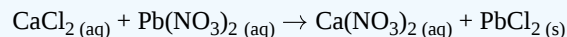
For each of the reactions below, predict the products formed. Use the correct chemical formulas. Then balance the reaction and tell which product would be soluble ("aq" aqueous solution) and which would be insoluble ("s" solid precipitate).



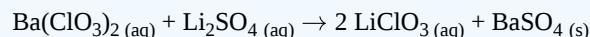
Answer



Answer



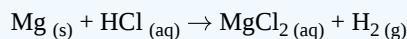
Answer



Oxidation and Reduction

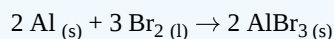
Exercise 1.7.4.5.1

For each reaction below, tell which element is being oxidized and which is being reduced.



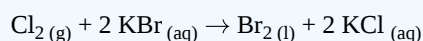
Answer

Mg is being oxidized (0 to +2 charge), Cl has no change (−1 to −1 charge), H is being reduced (+1 to 0 charge)



Answer

Al is being oxidized (0 to +3 charge), Br is being reduced (0 to −1 charge)



Answer

Cl is being reduced (0 to -1 charge), K is not changing ($+1$ to $+1$ charge), Br is being oxidized (-1 to 0 charge).

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