Mr. Gunstenson
Science 10

CR3 - Question Set #4

1. Write and balance the chemical equations for each of the following reactions. Also, identify them as either combination, decomposition, combustion, single or double replacement reactions.
    a. potassium iodide + lead(II)nitrate → potassium nitrate + lead(II)iodide
    b. ammonium hydroxide + zinc chloride → ammonium chloride + zinc hydroxide
    c. mercury(II)oxide → mercury + oxygen
    d. calcium + aluminum chloride → calcium chloride + aluminum
    e. mercury(I)nitrate + sodium carbonate → sodium nitrate + mercury(I)carbonate
    f. potassium bromide + aluminum nitrate → potassium nitrate + aluminum bromide
    g. calcium hydroxide → calcium oxide + water
    h. butane + oxygen → carbon dioxide + water
    i. aluminum oxide → aluminum + oxygen
    j. sodium + water → sodium hydroxide + hydrogen
    k. sodium chloride + fluorine → sodium fluoride + chlorine
    l. octane + oxygen → carbon dioxide + water
    m. aluminum + iron(III)oxide → aluminum oxide + iron
    n. iron(III)chlorate + silver nitrate → silver chlorate + iron(III)nitrate
    o. lithium oxide + water → lithium hydroxide
    p. iron (II) sulfide + oxygen → iron (III) oxide + sulfur dioxide
2. Predict the product (no phase is required) for each of the following reactions and write a balanced chemical equation:
    a. $Li_{(s)} + F_{2\,(g)} \rightarrow 2\ LiF$ - Combination
    b. $Al_{(s)} + S_{(s)}$
    c. $XeO_{4\,(s)}$
    d. $Ag_2O_{(s)}$
    e. $Zn_{(s)} + AgNO_{3\,(aq)}$
    f. $Al_{(s)} + HCl_{(aq)}$
    g. $Mg_{(s)} + FeBr_{3\,(aq)}$
    h. $Ca_{(s)} + H_2O_{(l)}$
    i. $Zn_{(s)} + SnI_{2\,(aq)}$
    j. $Mg_{(s)} + H_2SO_{4\,(aq)}$
    k. $Cl_{2\,(aq)} + KBr_{(aq)}$
    l. $Sn_{(s)} + HNO_{3\,(aq)}$
    m. $Pb(NO_3)_{2\,(aq)} + KCl_{(aq)}$
    n. $MgCl_{2\,(aq)} + NaOH_{(aq)}$
    o. $Ba(OH)_{2\,(aq)} + HCl_{(aq)}$
    p. $PbS_{(s)} + HNO_{3\,(aq)}$