Activity Series of Metals

Li	Lithium
K	Potassium
Ba	Barium
Sr	Strontium
Ca	Calcium
Na	Sodium
Mg	Magnesium
Al	Aluminum
Mn	Manganese
Zn	Zinc
Cr	Chromium
Fe	Iron
Cd	Cadmium
Co	Cobalt
Ni	Nickel
Sn	Tin
Pb	Lead
H	Hydrogen
Sb	Antimony
As	Arsenic
Bi	Bismuth
Cu	Copper
Hg	Mercury
Ag	Silver
Pt	Platinum
Au	Gold

Most Reactive

Least Reactive

Activity Series of NonMetals

F_2	Fluorine
Cl_2	Chlorine
Br_2	Bromine
I_2	Iodine

Single Replacement Reactions

1. Which of the following equations represents a single replacement reaction? Circle your choice.
   a. $Be(OH)_2 \rightarrow BeO(s) + CO_2(g)$ Decomp
   b. $Na(s) + HCl(l) \rightarrow H_2(g) + NaCl(aq)$ SR
   c. $H_2 + Cl_2 \rightarrow 2\ HCl$ Syn
   d. $AgNO_3(aq) + KI(aq) \rightarrow AgI(s) + KNO_3(aq)$ DR

2. Use the activity series of Metals to decide if a reaction will occur.
   a. $Al(s) + NiSO_4(aq) \rightarrow$ Reaction will occur / No reaction (circle your choice)
   b. $Zn(s) + MgBr_2(aq) \rightarrow$ Reaction will occur / No reaction (circle your choice)
   c. $Li(s) + H_2O(l) \rightarrow$ Reaction will occur / No reaction (circle your choice)

   HOH

3. Multiple Choice: For each of the following single replacement reactions, complete the equation by circling the letter that identifies the correct missing product(s).

- $Mg(s) + Zn(SO_4)(aq) \rightarrow Zn(s) + \_\_\_\_\_$
  a. $Zn(SO_4)$ b. $Mg + SO_4$ c. $Mg(SO_4)$ d. $Mg(SO_4)_2$

- $Li(s) + Ca(OH)_2(aq) \rightarrow Ca(s) + \_\_\_\_\_$
  a. $Li(OH)_2$ b. $Li(OH)$ c. $(OH)Li$ d. $Ca(OH)_2$

- $K(s) + H_2O(l)$ [written as HOH] $\rightarrow \_\_\_\_\_ + \_\_\_\_\_$
  HOH
  a. H and KOH b. H_2 and KO c. H_2 and KOH d. KH and HO

- $Cl_2(g) + NaBr(ag) \rightarrow \_\_\_\_\_ + NaCl(aq)$
  a. Br b. Br_2 c. Br^{1-} d. ClBr

4. Each reaction will occur. Predict products with correct formulas for the following single replacement reactions.

a. $Al(s) + FeCl_2 \rightarrow$ Fe(s) + $AlCl_3(aq)$

b. $Li(s) + H_2O(l) \rightarrow$ LiOH(aq) + $H_2(g)$
HOH