Review for Final #1

Translate the following statements into complete, balanced chemical equations:

- 1) When dissolved potassium iodide combines with a solution of lead (II) nitrate, lead iodide precipitate and dissolved potassium nitrate are formed.
- 2) Nitric acid undergoes a neutralization reaction with solid calcium hydroxide in an exothermic process.

Predict the products of the following reactions. Keep in mind that some of these reactions may not occur – you should indicate which will not and why.

3)
$$AI(OH)_3 + ___ H_2SO_4 \rightarrow$$

4) ___
$$K_2SO_4 + ___ Ba(NO_3)_2 \rightarrow$$

6) For the reaction $N_2 + 3 H_2 \rightarrow 2 NH_3$, indicate how many grams of hydrogen gas will be required to make 350 grams of ammonia. Assume that there is plenty of excess hydrogen.

7) The reaction from #6 is an equilibrium. What does this tell you about the validity of the calculation you performed above?