Chem 11 final review 4: Stoich

For all questions use the following reaction

N2 + 3H2 🡪 2NH3 + 91.8

1. How many grams of ammonia are produced when 12.5 L of nitrogen gas at STP are reacted with excess Hydrogen gas?
2. How many Molecules of nitrogen are required to fully react with 19.2 g of Hydrogen?
3. How much energy is produced when 1.63 x 1023 molecules of Hydrogen are reacted with excess Nitrogen?
4. 1.20 x 1024 molecules of Nitrogen is reacted with 36.96 L of Hydrogen gas at STP. How many grams of Ammonia will be produced?
5. If the experiment in 4) is carried out, and you only get 14.35 g of Ammonia, what is the percent yield for the reaction?
6. 73.4 g of 79% pure Hydrogen us reacted with 113.4 L of 92.1% pure Nitrogen gas at STP. What is the theoretical yield of Ammonia?
7. Household Ammonia is a 0.50 M aqueous solution of Ammonia. How many L of water would we have to use to make household Ammonia from the answer to 6).
8. What would the molarity of the solution from 6) be if 12.1 L of water was accidentally spilled into it?