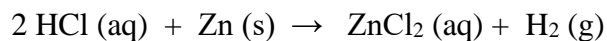


LIMITING REACTANT & PERCENT YIELD**Exit Ticket 9**

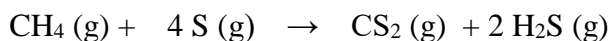
1. Consider the reaction shown below. In one experiment, 90.0 g of HCl was reacted with 50.0 g of zinc. How many grams of H₂ gas can be prepared from this reaction.



- a) Using the given mass of HCl, calculate the moles of HCl, moles of H₂ and mass of H₂.
- b) Using the given mass of zinc, calculate the moles of zinc, moles of H₂ and mass of H₂.
- c) Compare your answers in a) and b) and determine the limiting reactant and theoretical yield of H₂.

Limiting reactant: _____ Theoretical yield: _____

2. If 35.5 g of CH₄ and 75.5 g of S react as shown below, how many grams of H₂S are produced?



3. A particular reaction has a theoretical yield of 0.118 g and an actual yield of 0.104 g. What is the percent yield for this reaction?

4. The equation for the decomposition of potassium chlorate is shown below:



a) When 46.0 g of KClO_3 is completely decomposed, what is the theoretical yield of O_2 in grams?

b) If 12.1 g of O_2 is produced in the reaction above, what is the percent yield of this reaction?