

# Participation Assignment

## CHEM 1090-General Chemistry I

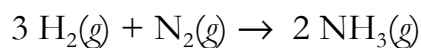
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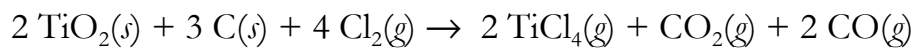
Section: 32, TR

Due Date: Thursday 10/26/2017

1. Calculate the mass of  $\text{NH}_3$  that can be produced from 10.00 g  $\text{H}_2$  and 40.00 g  $\text{N}_2$ . Also, identify the limiting reactant.



2a. Calculate the mass in grams of titanium(IV) chloride,  $\text{TiCl}_4$ , produced when  $9.70 \times 10^8$  g  $\text{TiO}_2$ , are reacted with an excess of carbon and chlorine:



2b. If  $2.17 \times 10^9$  g  $\text{TiCl}_4(g)$  are actually produced, what is the percent yield?