

A First Course on Kinetics and Reaction Engineering

Problem 1.4

Problem Purpose

This problem will help you determine whether you have mastered the learning objectives for this unit.

Problem Statement

The gas phase reaction $2 \text{NO} + 5 \text{H}_2 \rightarrow 2 \text{NH}_3 + 2 \text{H}_2\text{O}$ takes place in a system that initially contained 2 moles of H_2 and 1 mole of NO . If 50% of the limiting reagent is converted, what will the mole fraction of ammonia equal?