

Homework #9

Name: _____

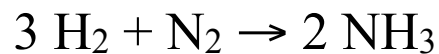
Student ID: _____

Chem 192 – Spring 2010
Cañada College

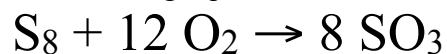
Total Possible Points: 10
Due Tue March 30th

Suggested chapter 9 problems: 2, 4, 8, 10, 12, 14, 16, 18, 26, 30

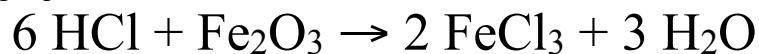
1. (one point) Hydrogen gas reacts with nitrogen gas to produce ammonia. How many moles of ammonia can be produced from 1.80 mol of hydrogen gas?



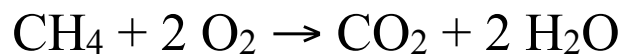
2. (two points) How many molecules of sulfur trioxide are produced when 1.62 moles of oxygen react completely in the following equation?



3. (two points) What mass of H_2O is produced when 12.0 grams of HCl react completely in the following equation?



4. (four points) In the following reaction 194g of CH₄ are reacted with 641g of O₂.



- (a) What is the limiting reactant?
- (b) What mass of water can be produced?

5. (one point) In a reaction to produce iron (III) selenide the percent yield is known to be 73.4 %. If the actual yield is 342 kg, what was the theoretical yield of this reaction?
(hint: when you check your answer, remember the actual yield can *never* exceed the theoretical yield)