

ChE 344
Week 11
Problem Set 16
Due Tuesday, March 19, 2013 (Lecture 17)

Individual Assignment

1. PLQ 17 - What equations in Tables (11-2) on page 494, (11-3) on page 495 and (12-2) on page 428-429 would change if there were pressure drop? Submit on CTools.
2. P12-4_A (a) - Email performance number to morabitm@umich.edu.

Group Assignment

1. P11-2_A (c).

Reworded: Suppose the butane reaction were able to be carried out adiabatically in a 0.8 m³ PFR that could be pressurized to very high temperatures and pressures such that the reaction still took place in the liquid phase.

- a. What inlet temperature would you recommend? Is there an optimum inlet temperature?
 - b. Plot the heat that must be removed [Q versus V] to maintain isothermal operation.
2. P11-4_A
 3. P12-2_A (b) Look at the Living Example Polymath Problem, only work Parts (1) through (4)
 4. P12-5_C Parts (a and b)