

Unit 14. Pre-Class Quiz Questions

1. True or false? In the differential analysis of batch reactor data, the derivative in the design equation is treated like other measured variables and not like a derivative.
2. True or false? Differential analysis is usually more accurate than integral analysis.
3. True or false? If the differential data analysis method is going to be used with batch reactor data, the reactor must be operated differentially.
4. Differential operation requires
 - a. that the reactor be operated adiabatically
 - b. that the reactor outlet is sampled with high frequency
 - c. that the relative change in molar flow rates of all species is small
 - d. that the reactor inlet flow is changed very slowly over time
 - e. that the reactor outlet flows are nearly zero
5. True or false? With noisy data, it is better to approximate the derivative using finite differences than by graphical or polynomial fitting methods.