

Name: _____

Problem 1b: Levenspiel Plot (6 points)

The following irreversible, liquid-phase reaction ($A + B \rightarrow C + D$) is carried out in two separate *steady-state* reactors, a PFR and a CSTR. Both reactors achieve the same conversion ($X_{PFR} = X_{CSTR}$). The Levenspiel plot for this reaction is given below. **Is it possible to have a scenario where the volume of the aforementioned CSTR is less than the volume of the aforementioned PFR (i.e., $V_{CSTR} < V_{PFR}$)?**

Respond with yes or no **and** a short justification or a qualitative graph. Responses that guess the correct answer without justification will not receive credit.

