

AME 60636
Prof. J. M. Powers
Homework 8
Due: Thursday, 30 October 2006

1. Consider the problem discussed in detail in lecture in which $A \rightleftharpoons B$, and for which A and B have identical molecular masses and identical specific heats, and in which the system undergoes a one-step reversible reaction. Using almost all of the same parameters and same model, study how the system behaves as E_f is varied. Give a plot of the equilibrium value of λ as a function of E_f . Give a plot of the induction time as a function of E_f . Use both the asymptotic and full numerical integration to determine the induction time.