Q1)

It is desired to absorb 50 mol % of B in air into water. Outlet flowrate of air stream is 30kgmol/hr. Inlet composition of B in air is 8mole%. Initially pure water is used in this absorption process with a flow rate of 90kgmol/hr. The equilibrium relation is given as:

\[ Y_B = 3.5X_B \]

a) Determine the # of theoretical stages by graphical approach
b) Determine # of theoretical stages by Kremser equation
c) If the tray efficiency is 50% what is the actual number of stages?

HW11

Q1) Why do you think optimum liquid flowrate should be selected as 1.1 to 1.5 L/min