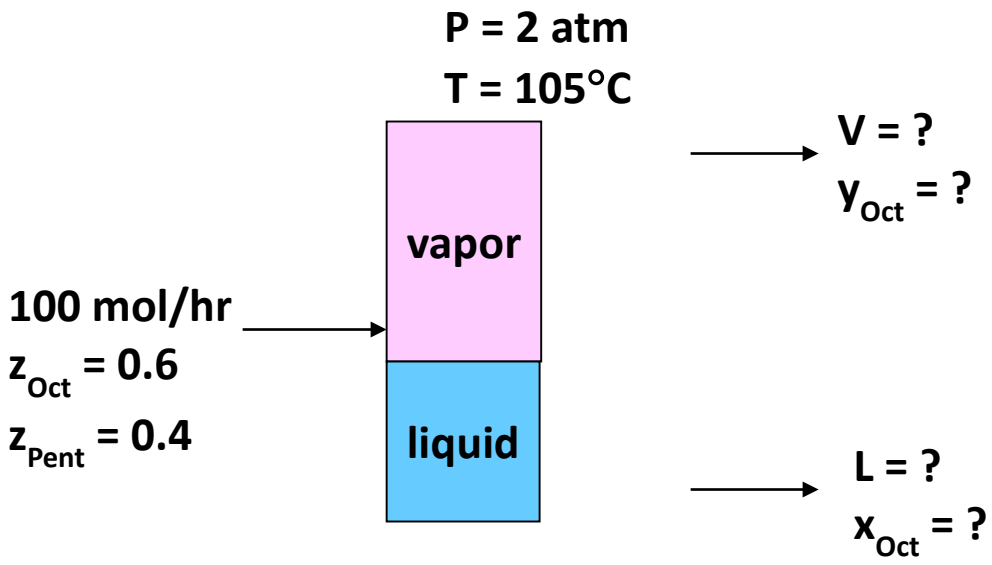
Name_____

ChEn 273 **Special Problem 6b**

A mixture of iso-octane (C_8H_{18}) and n-pentane (C_5H_{12}) is sent to a flash drum to partially separate the two compounds, as follows:



(a) Find the normal boiling points of the two liquids (you may have to use the internet for iso-octane).
(b) Find the DIPPR vapor pressure constants for these two compounds.
(c) Find the vapor pressures of the two compounds at the temperature of the flash drum.
(d) Perform the flash calculation to find the exit composition of the vapor, the exit composition of the liquid, the vapor flow rate (V), and the liquid flow rate (L).
(e) What temperature must be used to get 20% of the pentane in the liquid state?