Use the McCabe-Thiele technique to step off stages in a rectifier for the purification of hexane from octane. It is desired to produce a product 95% pure in hexane. The rectifier has a total condenser, a reflux ratio of 2, and is operated at a uniform pressure of 1 bar. The feed to the column is 100 mol/hr (all vapor). What is the lowest possible liquid composition that can exit the bottom of the rectifier?

(XY Phase Diagram attached)