Bonus Assignment
March 9, 2005

Consider the problem of measuring the ultrafiltration rate in hemodialysis machines using two flow meters on the dialysate side before and after the filter. Calculate the required lowest accuracy of the flow meters to enable the estimation of the ultrafiltration rate within ±10% of its true value.

Problem Data:
- Nominal dialysate side flow rate: 800 mL/min
- Nominal water removal rate: 1L/hr