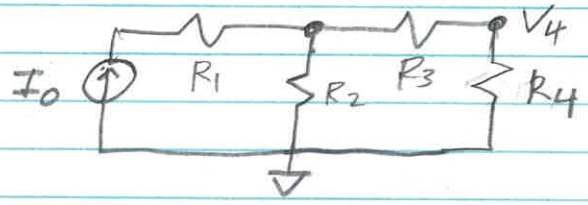
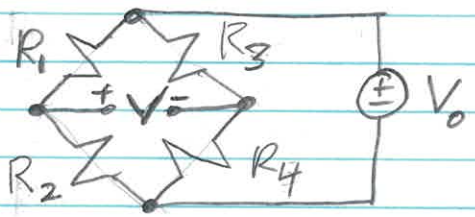
Physics 120 - Spring 2019

① Find V_4 in terms of I_0, R_1, R_2, R_3 & R_4

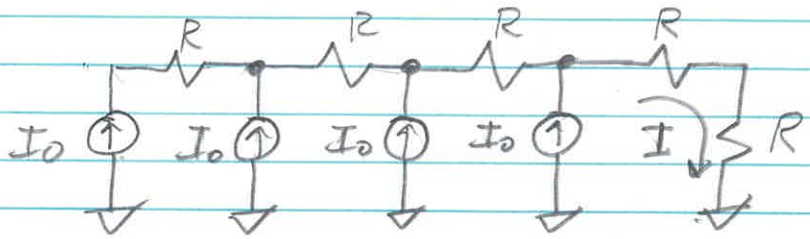


② Find V for the Wheatstone bridge circuit



③ For the wheatstone bridge, let $R_1 = R_2 = R_3 \equiv R$ and $R_4 = R + \delta R$, with $\delta R \ll R$. Find an expression for V to first order in δR. Recall the expression $(1+\epsilon)^n = 1 + n\epsilon + \cdots$.

④ Solve for I in terms of I_0.



⑤ Find the Thévenin equivalent circuits between A & A'