

b. Check your V' expression by showing $\nabla^2 V' + \frac{\partial}{\partial t}(\vec{\nabla} \bullet \vec{A}') = -\rho / \varepsilon_0 = 0$ and $\left(\nabla^2 - \frac{1}{c^2} \frac{\partial^2}{\partial t^2} \right) \vec{A}' - \vec{\nabla} \left(\vec{\nabla} \bullet \vec{A}' + \frac{1}{c^2} \frac{\partial V'}{\partial t} \right) = -\mu_0 \vec{J} = 0$. Are $\vec{A}'$, V' in the Lorentz Gauge?