Homework 6 Corrections

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Problem 1

a.

I should make the vectors look like vector otherwise they look like any other constant. Adding vector notation would help otherwise it is confusing to the reader.

b.

Looking at the Homework 6 correction I should of included more of my step or at least included scratch work that lead me up to my solution. In comparison I could have shown a lot more work.

d.

I should keep one notation to not confuse myself or the reader. In part d I had mixed up my notation that would ultimately lead me to the wrong solution. The correct way is $\frac{d}{dt}\phi = \dot{\vec{r}}\vec{\nabla} + \frac{\partial \phi}{\partial t} = \dot{\vec{r}}\vec{\nabla}\phi$. Since $\vec{\nabla}\phi = E$ we finally get the final part of the equation $q(E_0\dot{\vec{r}})$.