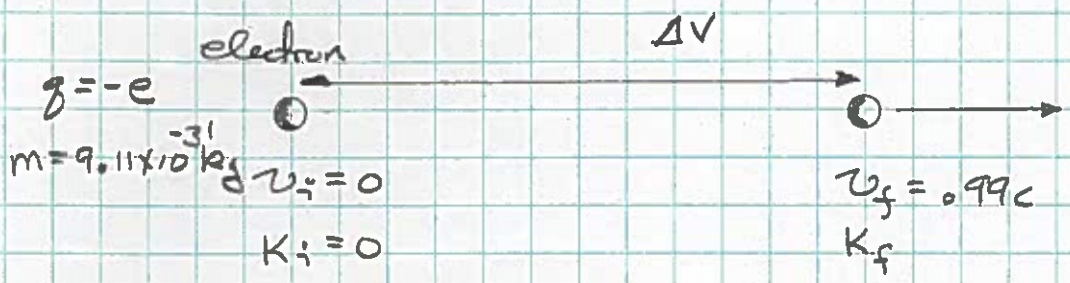

Conserve Energy:

$$\Delta K + \Delta U_{elec} = 0$$

$$(K_f - K_i) + q\Delta V = 0$$

$$K_f - e\Delta V = 0$$

$$\Delta V = \frac{K_f}{e}$$

Now, what's the answer nonrelativistically?

$$\Delta V = \frac{\frac{1}{2}mv_f^2}{e} = 1.64\times10^5\ V \quad \text{(incorrect)}$$

Correct Relativistic answer:

$$\Delta V = \frac{K_f}{e} = \frac{(\gamma_v - 1)mc^2}{e}$$

where $\gamma_v = \frac{1}{\sqrt{1 - \frac{v_f^2}{c^2}}} = 7.09$

$$\therefore \Delta V = 3.12\times10^6\ V$$