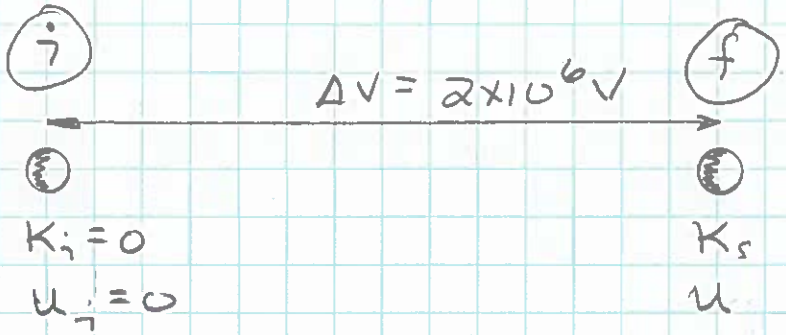

electron: $q = -e$, $m = 9.11\times10^{-31}$ kg.

Conserve energy $i \to f$:

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

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

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

So $\underline{K_f = e\Delta V}$

Relativistic KE:

$$K_f = (\gamma_p - 1)mc^2 = e\Delta V$$

So, $\gamma_p = 1 + \frac{e\Delta V}{mc^2} = 4.9$

And, $\gamma_p = \frac{1}{\sqrt{1 - u^2/c^2}}$

$$\Rightarrow \frac{u}{c} = \sqrt{1 - \frac{1}{\gamma_p^2}} = 0.98$$

$\therefore$ $\underline{u = 2.9\times10^8 \text{ m/s}}$

Maybe you tried: (Nonrelativistic)

$K_f = \frac{1}{2}mu^2 = e\Delta V \Rightarrow u = \sqrt{\frac{2e\Delta V}{m}} = 8.4\times10^8$ m/s

But $> c$!