

- In this experiment, you will determine the Emf E_0 , internal resistance of the cells and the resistance R a wire provided.**

Note: You have been given Values of E , V , and I .

You're required to do the rest of the necessary manipulation

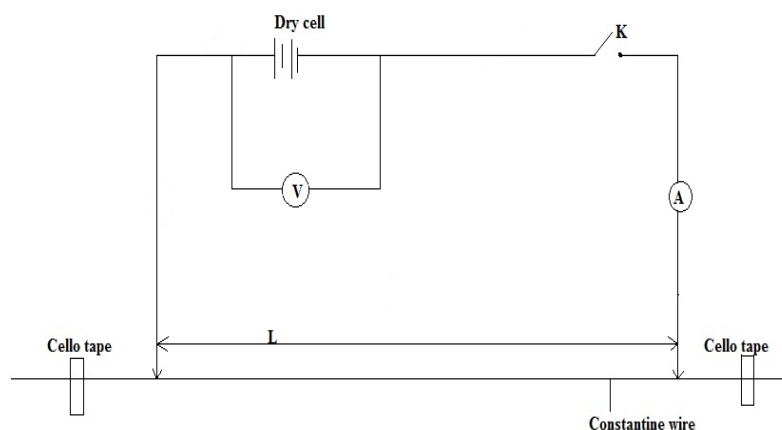


Fig.1

- Connect the circuit as shown above.
- Read the voltmeter reading E . (**3.00V**)
- Adjust L to equal 0.20m
- Close the switch key
- Note the ammeter and voltmeter readings I and V respectively and open switch K . (**$I=0.92A$, $V= 2.10V$**)
- Repeat procedures (b) to (e) for values of $L= 0.30, 0.40, 0.50, 0.60$, and $0.70m$.

L	0.20	0.30	0.40	0.50	0.60	0.70
I	0.92	0.72	0.58	0.50	0.46	0.40
V	2.10	2.20	2.25	2.40	2.45	2.50

- Tabulate your results including values of $(E-V)$, V/I , and $(1-L)$
- Plot a graph of $(E-V)$ against I
- Find the slope S of the graph.
- Plot a graph of V/I against $(1-L)$
- Determine the value R of V/I when $(1-L)=0$
- Plot a graph of V against I
- Determine the slope s , of the graph
- Determine the internal resistance r , of the cell, from $r= -s$
- Determine the value E_0 of V when $I=0$
- Compare E_0 with E

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