

Answer on Question #69573, Physics / Electric Circuits

Can potentiometer wire be used to find balancing length for a cell of 6V? Why?

Answer: yes

We can find balancing length for a cell from comparison of emfs of two cells in one circuit using potentiometer.

In this case we have equation:

$$\frac{E_1}{E_2} = \frac{l_1}{l_2}$$

where E_1, E_2 are emfs of two cells; l_1, l_2 are balancing lengthes.

If we know E_1, E_2, l_2 then we can find l_1

Let $E_1 = 6V$. Then:

$$l_1 = \frac{6l_2}{E_2}$$

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