

## 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 lengths.

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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