**CONNECTING RESISTORS IN SERIES USING PHET**

1.Select Phet "circuit construction" in "realistic visualization".

2. Assemble the circuit connecting two resistors in series, with the ammeters as shown in the image and with the switch open.

3. Measure successively with the voltmeter the voltage at the ends of the source and the voltage at the ends of each resistor and record these values.

SOURCE VOLTAGE V = …………………

VOLTAGE AT THE END OF R 1 V 1= …………………

VOLTAGE AT THE END OF R 2 V 2= …………………

What relationship connects the above trends?

……………………………………………………………………………………

4. Record the current measured by the ammeters.

CURRENT BETWEEN SOURCE AND R 1 I1=…………………..

CURRENT BETWEEN R 1 AND R 2 I2=…………………..

CURRENT BETWEEN R 2 AND SOURCE I3=…………………..

What is the relationship between the above currents?

……………………………………………………………………………………..

Do resistors consume current?

……………………………………………………………………………………………

……………………………………………………………………………………….

5. Based on the values of the voltages and currents you found, calculate the values of the resistances R 1 and R 2, as well as the total resistance R ωλ of the system of the two resistors.

R 1=…………………. R 2=…………………. R total=…………… …..

What relationship connects the values of the above resistors?

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