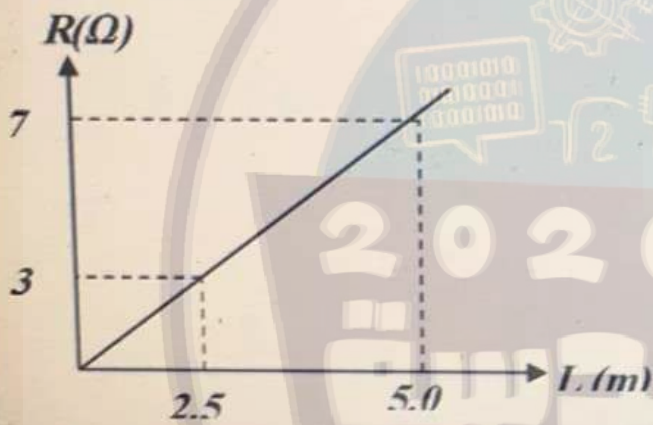


Let the cylindrical wire has a resistance  $R$  and resistivity  $\rho$ . If its length and diameter are BOTH cut in half, what will be its resistance?

- a)  $4R$
- b)  $2R$
- c)  $R$
- d)  $R/2$
- e)  $R/4$

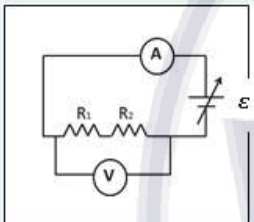
The graph below represents the relationship between the resistance and the length of a wire of a cross-section area  $A = 1.22 \times 10^{-7} \text{ m}^2$ . Depending on the graph, the resistivity (in  $\Omega \cdot \text{m}$ ) of the wire's material is:



Select one:

- a.  $2.85 \times 10^{-7}$
- b.  $1.95 \times 10^{-7}$
- c.  $2.22 \times 10^{-7}$
- d.  $2.08 \times 10^{-7}$

The slope of  $V$  versus  $I$  is  $9 \text{ V/A}$ . Knowing that  $R_2 = 5.0 \Omega$ , the value of  $R_1$  (in  $\Omega$ ) is:



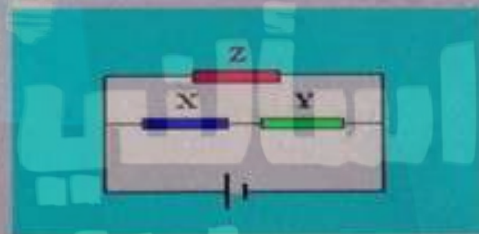
- 11.25
- 10
- 4
- 5

Clear my choice

اسألني  
2020  
عن المندسة

### Ohm's Law

Given the simple electrical circuit shown below. If the current in all three resistors is equal, which of the following statements must be true?



- a) X and Y added together have the same resistance as Z.
- b) X, Y, and Z all have equal resistance.
- c) X and Y have equal resistance.
- d) X and Y each have more resistance than Z.

Select one:

- a. a



## Ohm's Law Experiment

Ohm's law is not applicable to:

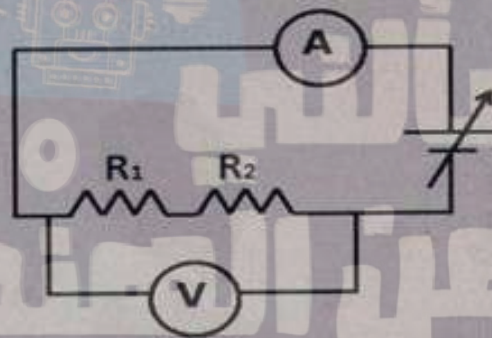
- a) DC circuits
- b) high currents
- c) small resistors
- d) semi-conductors
- e) wire resistors.

Select one:

## Ohm's Law Experiment

The slope of  $V$  versus  $I$  is  $31 \text{ V/A}$ . Knowing that  $R_2 = 10.0 \Omega$ , the value of  $R_1$  (in  $\Omega$ ) is:

- a) 5.0
- b) 21.0
- c) 10.0
- d) 4.0
- e) 13.3



Select one:

- a. a
- b. b

In Ohm's Law experiment, In order to measure the resistivity (at a given temperature) of an Ohmic conductor of uniform cross section, we need to know (at that temperature) its

- a. Density, length, and resistance
- b. Cross-sectional area and length
- c. Cross-sectional area, length, and resistance
- d. Length and resistance

Clear my choice



In Ohms Law Experiment: Both a Voltmeter (voltage sensor) and an Ammeter (current sensor) are used. How these two devices are connected to our circuit is important. Which statement is correct?

The voltmeter must be Connected in Parallel with the resistor while the Ammeter must be Connected in Series with the resistor .a

Both devices must be Connected in Parallel with the resistor .b

The voltmeter must be Connected in Series with the resistor while the Ammeter must be Connected in Parallel with the resistor .c

Both devices must be Connected in Series with the resistor .d

أجل اختياري



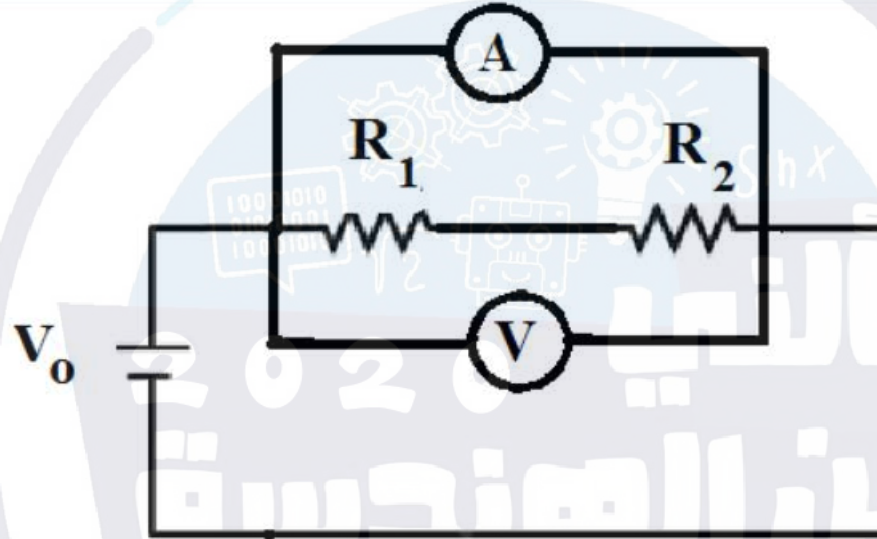
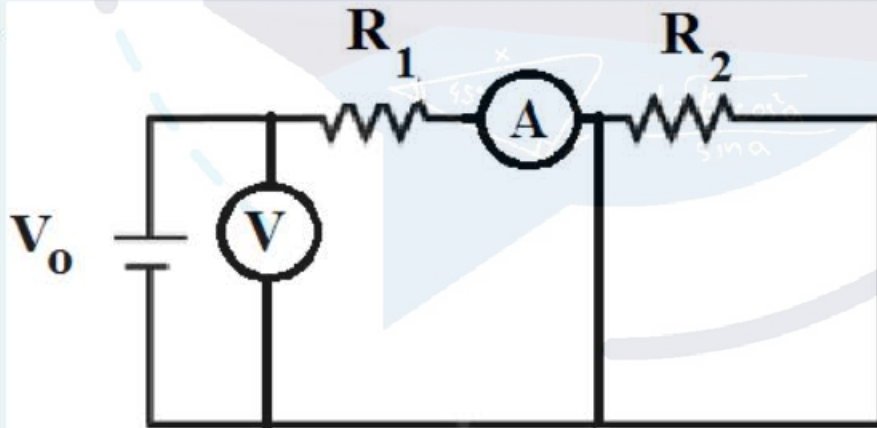
## Question 3

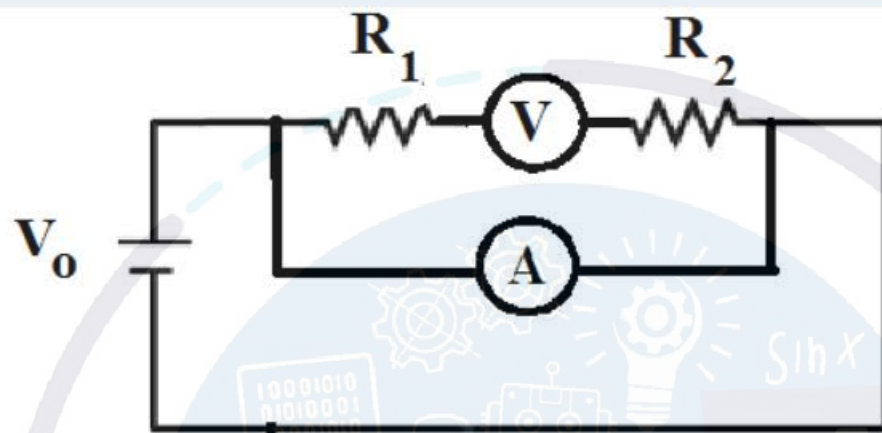
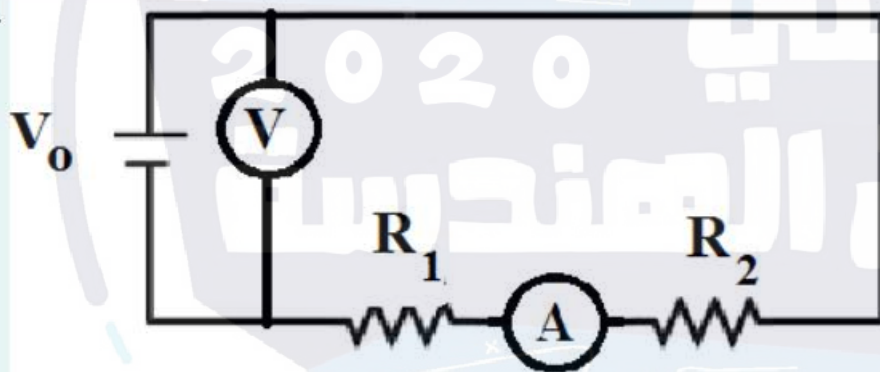
Not yet answered

Marked out of 2.5

Flag question

You are given two Ohmic resistors  $R_1$  and  $R_2$  and asked to use Ohm's law to verify that their equivalent resistance when they are connected in series is their sum. Which circuit do you set up?

 a. b.

c. d. e.