Kirchhoff's Laws
(Phys 119)

أ. سجى القصير

جامعة الامام محمد بن سعود الإسلامية

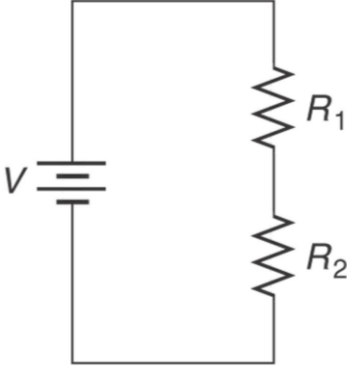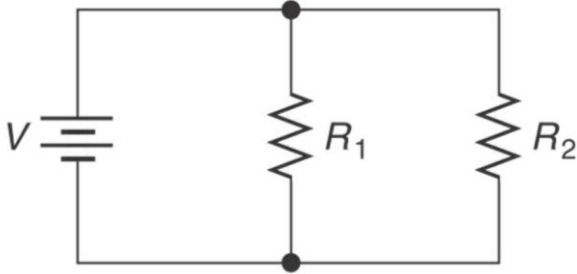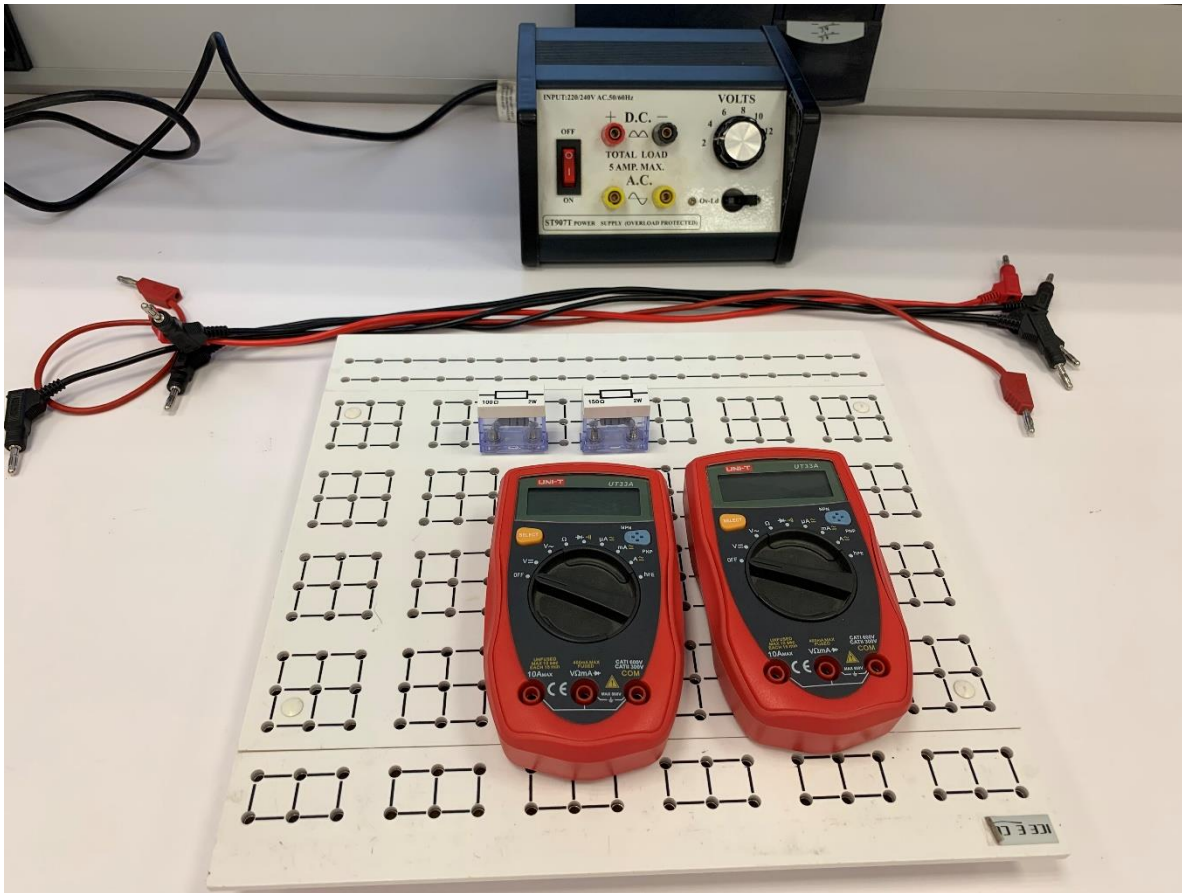# *Objective*

1. To investigate Kirchhoff's law using resistors in DC circuits connected in series and parallel.

Theory

	Series	Parallel
Circuit		
Voltage	$V_{total} = V_1 + V_2$	$V_{total} = V_1 = V_2$
Current	$I_{total} = I_1 = I_2$	$I_{total} = I_1 + I_2$

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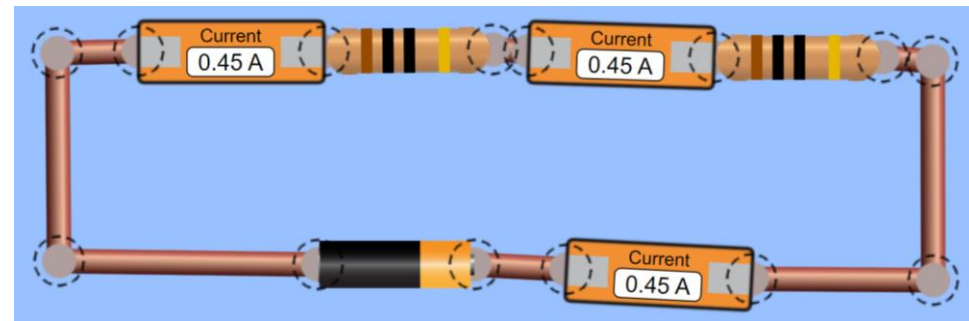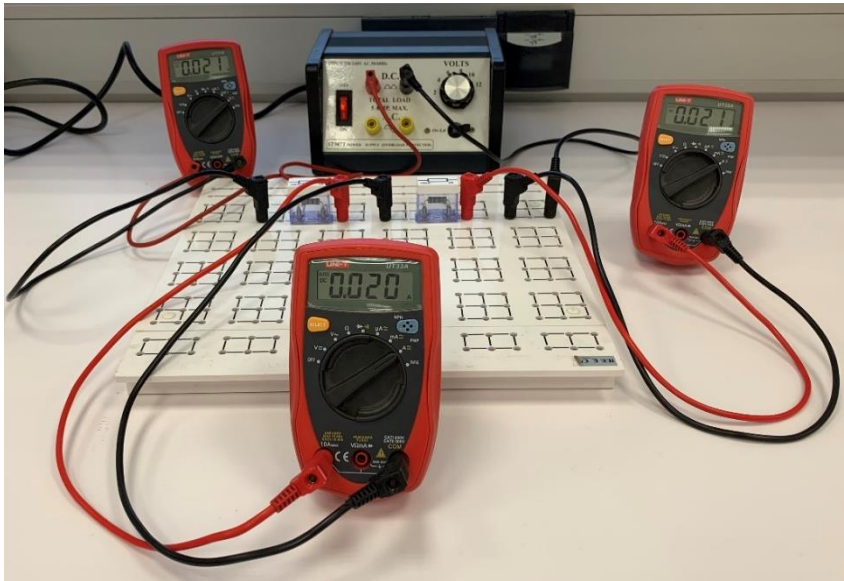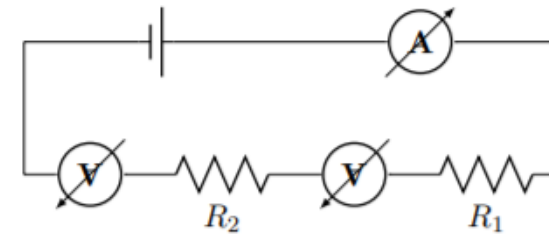جامعة الامام محمد بن سعود الإسلامية

Equipment

- **DC power supply**

- **3 digital multimeters**

- **breadboard**

- **2 resistors**

- **connecting leads.**

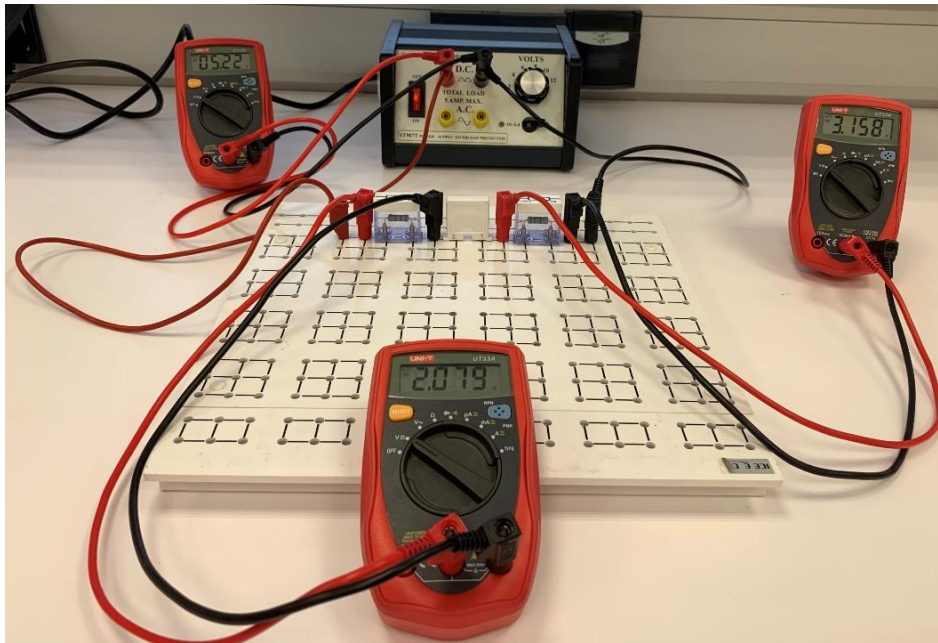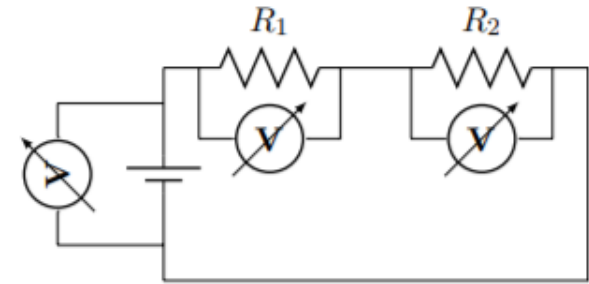| $I(A)$	$I_1(A)$	$I_2(A)$	Relation

$V(V)$	$V_1(V)$	$V_2(V)$	Relation

$I(A)$	$I_1(A)$	$I_2(A)$	Relation

Part 4 - Kirchhoff's Voltage Law (Parallel)

$V(V)$	$V_1(V)$	$V_2(V)$	Relation

Calculations