Verification of Thevenin's Theorem

Procedure:

Keep all the resistances **(R_1, R_2, R_3, R_L)** close to their respective maximum values. Choose any arbitrary values of **V_1 and V_2**.

Experiment Part Select:

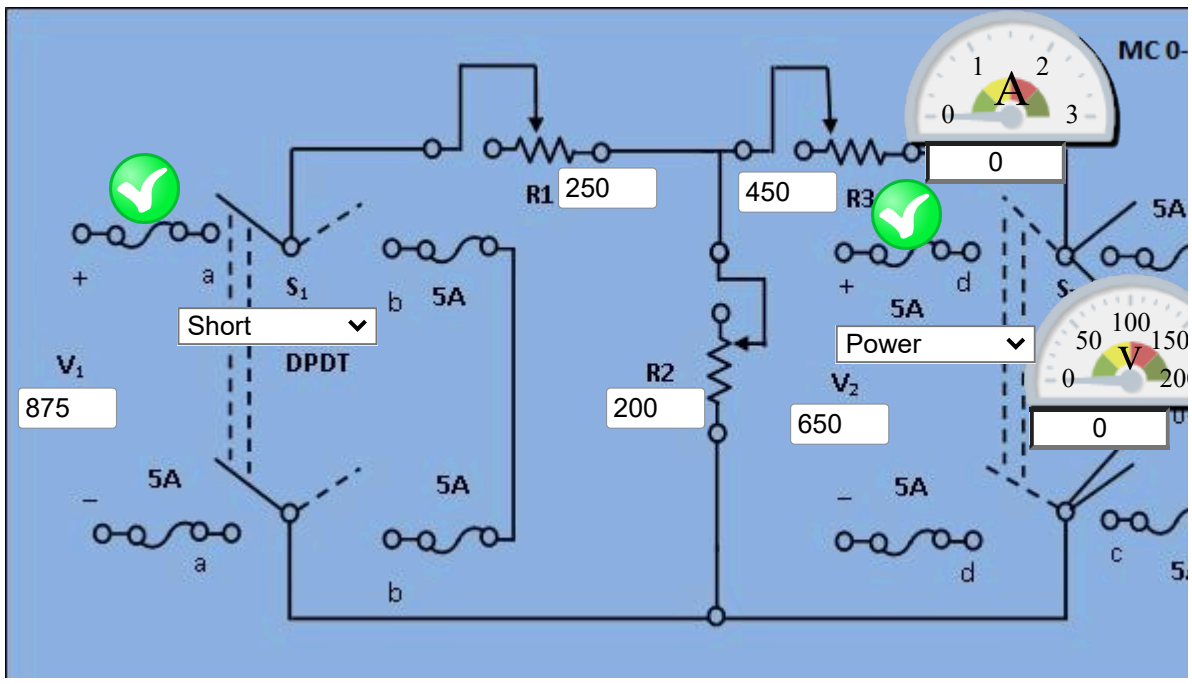
Case 1:
Select switch of S_1 to Power and S_2 to load. Simulate the program. Observe the result from Table 1.

Case-2:
a)Thevenin Voltage analysis:
Apply switch S_1 to power and S_2 to intermediate. Simulate the program.Read Thevenin voltage (V_{th}) from Case 2 tab.

b)Thevenin Resistance analysis:
Apply switch S_1 to short and S_2 to power. Simulate the program. Read Thevenin resistance (R_{th}) from Case 2 tab.

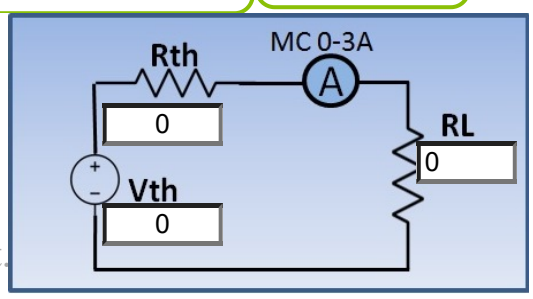
Case-3: Using V_{th} and R_{th} determine Load Current:
Specify the load resistance in case of the result table as the same load resistance entered in the main circuit. Simulate the program. Read Load current (I_L) from Case 3 tab. Compare the load currents (I_L) obtained from above two cases.

MC-Moving Coil.
DPDT- Double pole Double throw.
N.B.:- All the resistances are in ohms.



Case 1 | Case 2(a) | Case 2(b) | Case 3

Click on simulate to get the Load Current(I_L) from the Thevenin equivalent parameter of the above circuit.



Load Current(I_L) : 0

Sin

Fill data

Observation Table:

Serial no. of Observation	Load Current(I_L) from case 1	Load Voltage(V_L)	Load Resistance (R_L)=V_L/I_L	Thevenin Voltage(V_{th}) from case 2(a)	2nd Voltage source(v) for case 2(b)	Ammeter Reading(I) from case 2(b)	Thevenin Resistance R_{th}=V/I
1st	0.13548	81.288	600	140.00	320	0.73846	433.33
2nd	0.12727	12.727	100	30.000	100	0.73684	135.71
3rd	0.21000	189	900	388.50	990	1.0421	950.00
4th	0.20811	18.7299	90	38.500	99	1.0421	95.000
5th	0.35000	192.5	550	388.89	650	1.1584	561.12