

EASTERN MEDITERRANEAN UNIVERSITY

DEPARTMENT OF ELECTRICAL AND ELECTRONIC  
ENGINEERING

EENG223

CIRCUIT THEORY I

EXPERIMENT 3

THEVENIN

Student Name & Student Number

1.....

2.....

3.....

**Object:** To find a method of simplifying a network in order to obtain the current flowing in one particular branch of the network.

- Construct the circuit in Fig 3.1 and measure I.

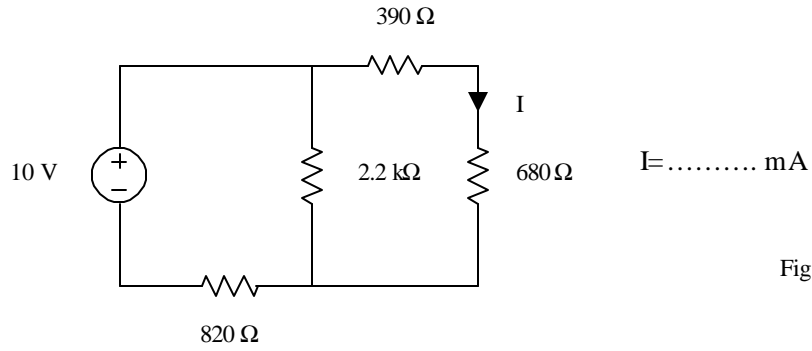


Fig. 3.1

- Construct the circuit in Fig 3.2 and measure  $V_{oc}$ .

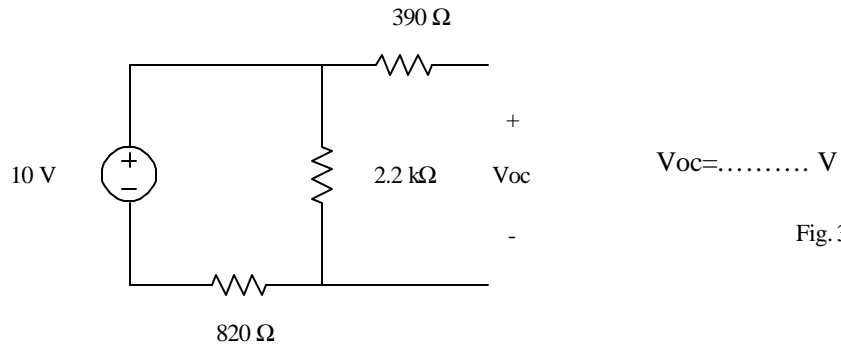
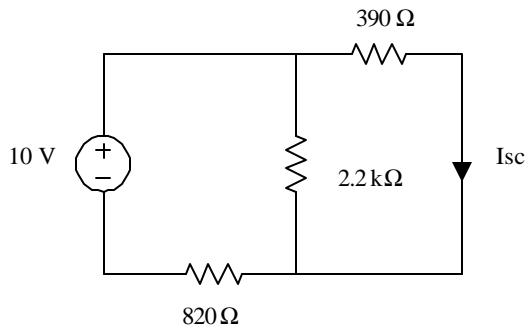


Fig. 3.2

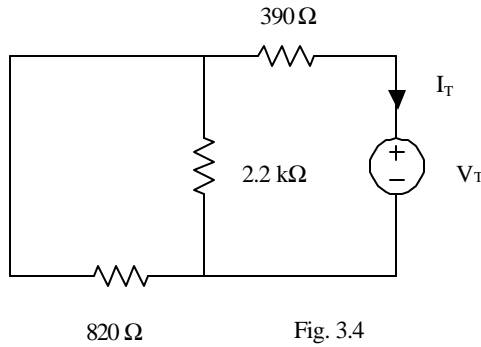
- Construct the circuit in Fig 3.3 and measure  $I_{sc}$ .



$I_{sc} = \dots\dots\dots \text{mA}$

Fig. 3.3

- Construct the circuit in Fig 3.4 and measure  $I_T$  and fill Table 3.1.

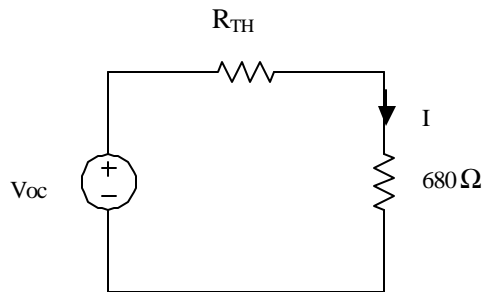


**Table 3.1**

$V_T$ (V)	$I_T$ (mA)	$R_{TH}$ ( $\Omega$ )
2		
4		
6		
8		

Average value of  $R_{TH} : \dots\dots\dots \Omega$

- Construct the thevenin equivalent of the original circuit in Fig. 3.5 by using  $V_{oc}$  and  $R_{TH}$  and measure  $I$  value again to satisfy it with the one found in the first step.



$I = \dots\dots\dots \text{mA}$

Fig. 3.5