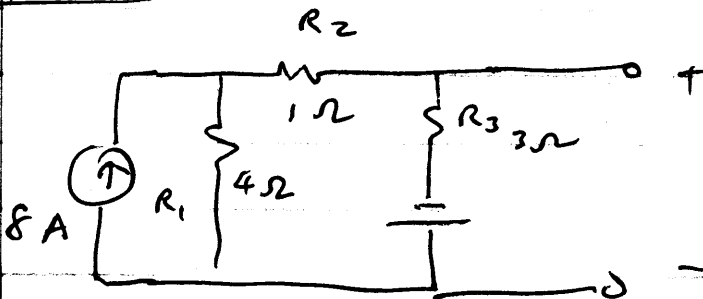


2012/4/2

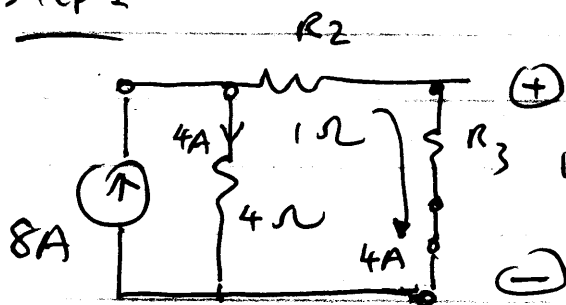
①

P. 358.



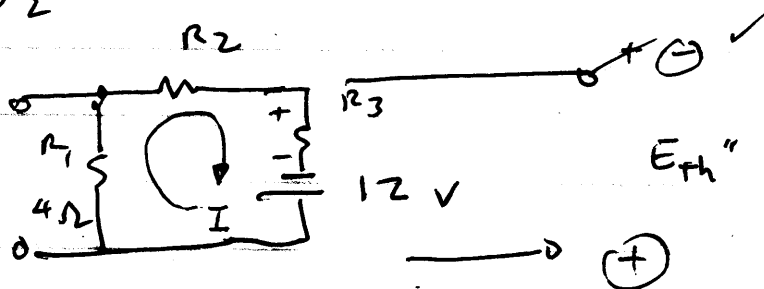
$$E_{th}' + E_{th}'' = E_{th}$$

Step 1



$$E_{th}' = 4A \cdot 3\Omega = 12V$$

Step 2



$$E_{th}'' = 12V - 4.5V = 7.5V$$

$$I = \frac{12V}{4\Omega + 1\Omega + 3\Omega} = 1.5A$$

$$V_{R3} = 3\Omega \cdot 1.5A = 4.5V$$

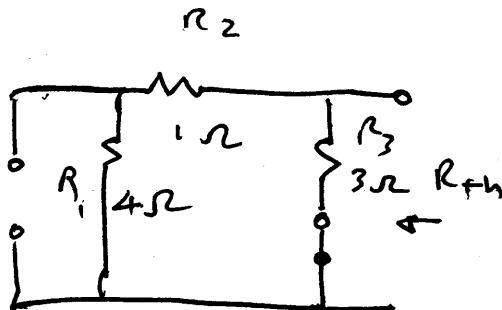
Step 3

$$E_{th} = E_{th}' + E_{th}'' = 12 - 7.5 = \boxed{4.5V}$$

(2)

Step 4

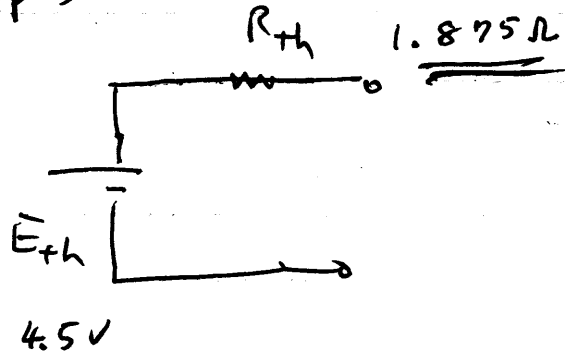
$R_{th} =$



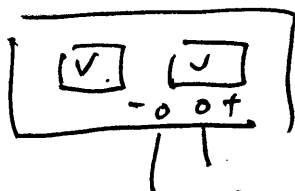
DMM
Ohm's measurement

$$R_{th} = (R_1 + R_2) \parallel R_3$$
$$= 5 \parallel 3 = \frac{15}{8} = 1.875 \Omega$$

Step 5 Construct Thevenin's E_g .



potentiometer
V.R.

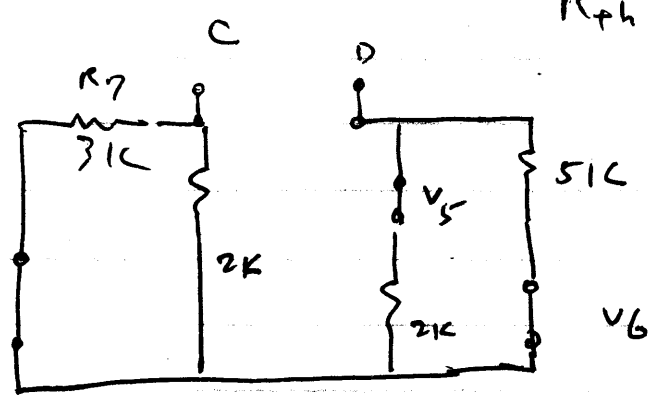


power supply

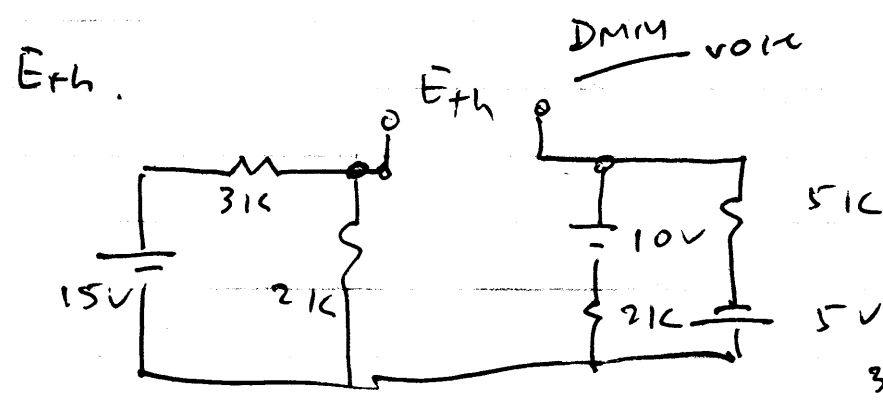
DMM
VOLT
4.5V

3

$$R_{th} = R_{CD}$$



$$R_{CD} = (3k \parallel 2k) + (2k \parallel 5k)$$



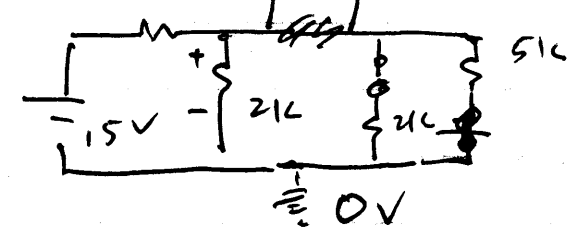
$$E_{th}' = V_{2k\Omega} = 6V$$

E_{th}' — 15V alone

E_{th}'' — 10V alone

E_{th}''' — 5V alone

$$E_{th} = E_{th}' + E_{th}'' + E_{th}'''$$



$$15V \times \frac{2}{5} = 6V$$

Zero