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ΠΑΝΕΠΙΣΤΗΜΙΟ  
ΘΕΣΣΑΛΙΑΣ

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**8:**

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1. μ μ ,
  2. μ μ .
  3. μ μ μ .
  4. μ μ .
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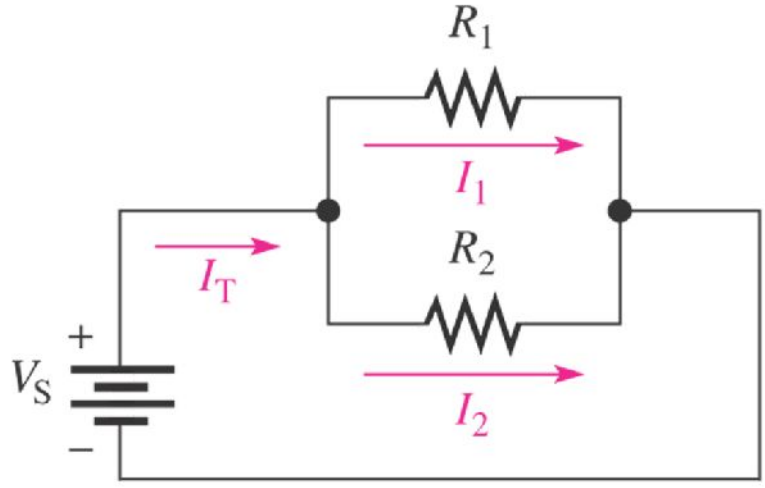
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2019



$I_{\max} = V_S / R_{\min}$        $I_{\min} = V_S / R_{\max}$



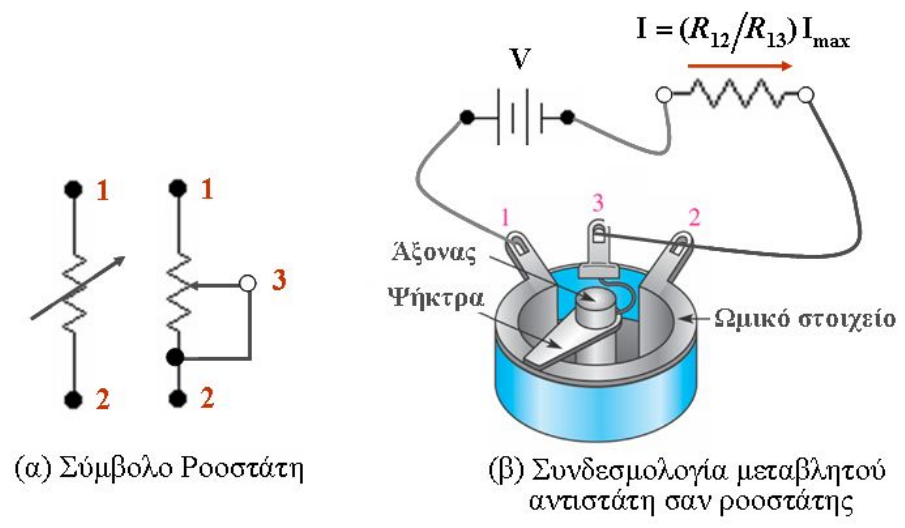
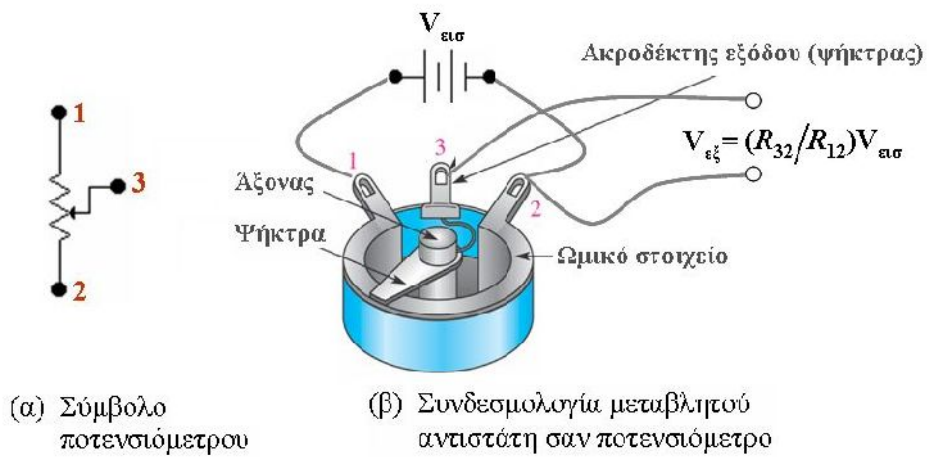
$I_x = \left( \frac{R_T}{R_x} \right) \cdot I_T$

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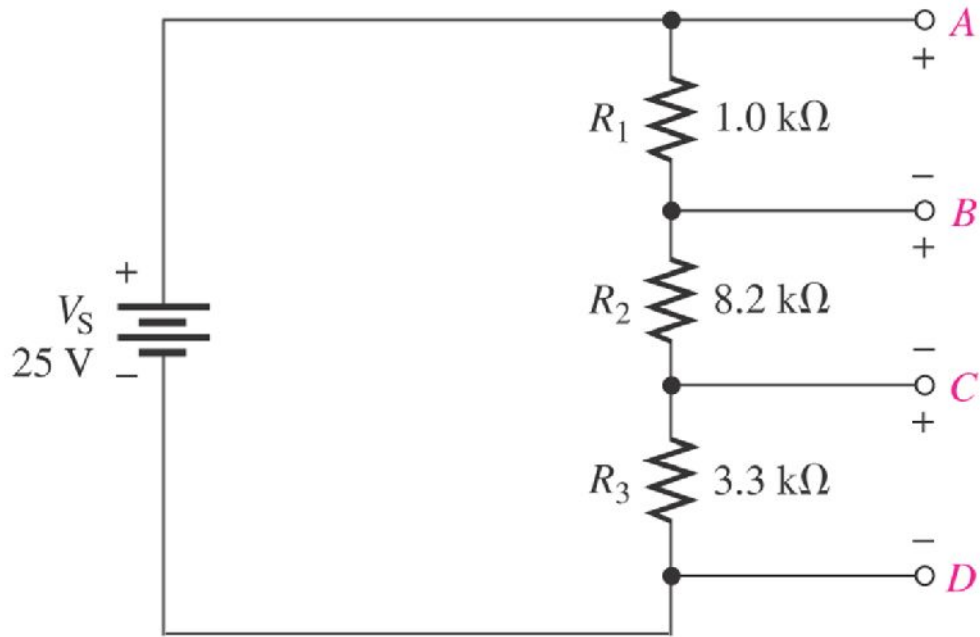
$$I_1 = \left( \frac{R_2}{R_1 + R_2} \right) \cdot I_T$$

$$I_2 = \left( \frac{R_1}{R_1 + R_2} \right) \cdot I_T$$





( ) ( ) C ( ) C ( ) B D ( ) C D



$R :$

$$R = 1.0 \text{ k} + 8.2 \text{ k} + 3.3 \text{ k} = 12.5 \text{ K}$$

( )  $R_1$ .

$$V_{AB} = \left( \frac{R_1}{R_T} \right) V_S = \left( \frac{1.0 \text{ k}}{12.5 \text{ k}} \right) 25 \text{ V} = 2 \text{ V}$$

( )  $R_X$   $R_1 + R_2$ .

$$V_{AC} = \left( \frac{R_1 + R_2}{R_T} \right) V_S = \left( \frac{9.2 \text{ k}}{12.5 \text{ k}} \right) 25 \text{ V} = 18.4 \text{ V}$$

( ) C  $R_2$ .

$$V_{BC} = \left( \frac{R_2}{R_T} \right) V_S = \left( \frac{8.2k}{12.5k} \right) 25V = 16.4V$$

( ) D  $\mu R_2 + R_3$ .

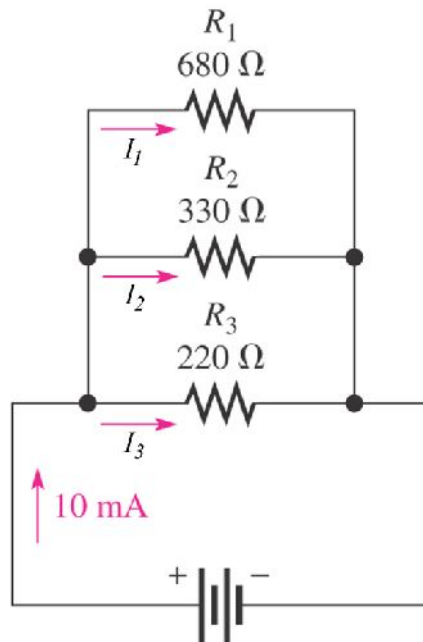
$$V_{BD} = \left( \frac{R_2 + R_3}{R_T} \right) V_S = \left( \frac{11.5k}{12.5k} \right) 25V = 23V$$

( ) C D  $R_3$ .

$$V_{CD} = \left( \frac{R_3}{R_T} \right) V_S = \left( \frac{3.3k}{12.5k} \right) 25V = 6.6V$$

$\mu$   $\mu$   $\mu$  Kirchhoff,  $V_{AB}, V_{BC}, V_{CD}$   $\mu$   $V_S$

$\mu$   $\mu$   $\mu$   $\mu$   $\mu$   $\mu$



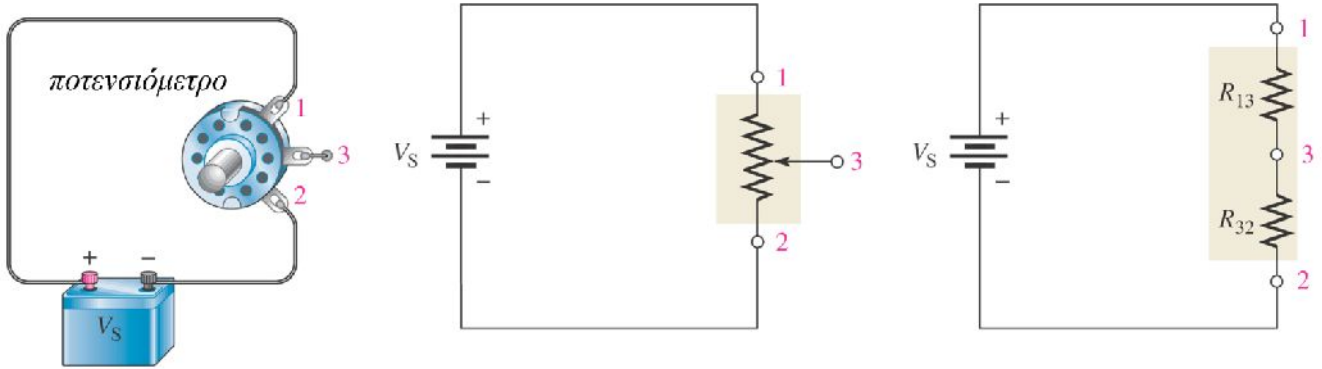
$\mu$  R :

$$\frac{1}{R_T} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} = \frac{1}{680} + \frac{1}{330} + \frac{1}{220} \Rightarrow R_T = 111$$



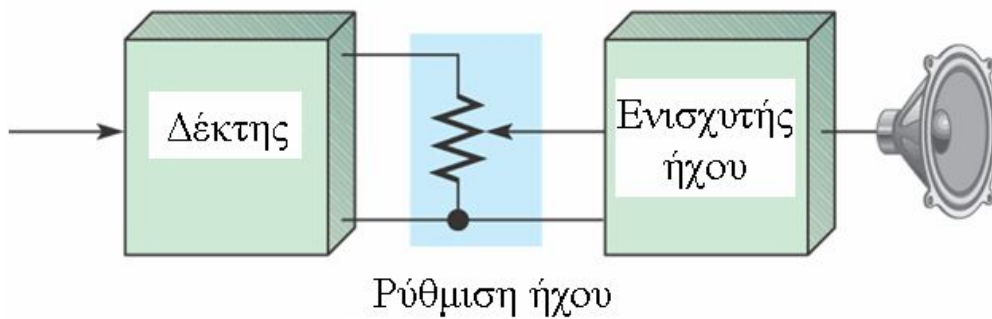


μ μ μ  
 μ , μ μ  
 R<sub>13</sub> R<sub>32</sub> μ μ (1 & 3) (3 & 2)

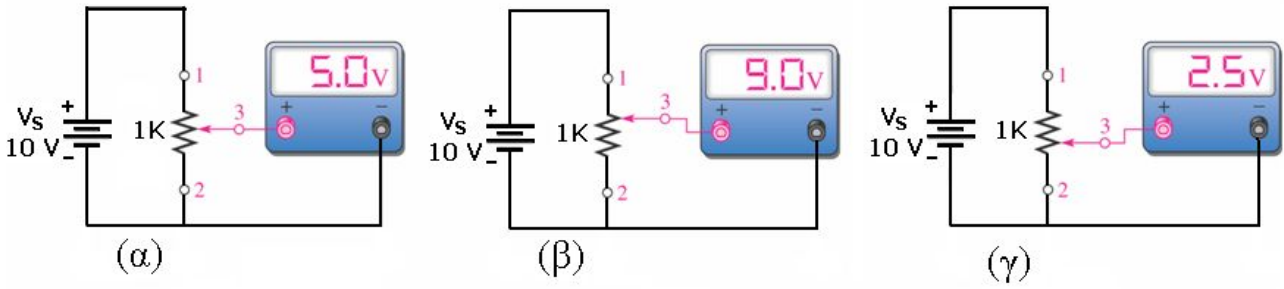


- μ μ μ 3 μ , μ μ R<sub>13</sub> R<sub>32</sub> .
- μ 1, R<sub>32</sub>
- μ 2, R<sub>32</sub> μ

μ μ μ μ

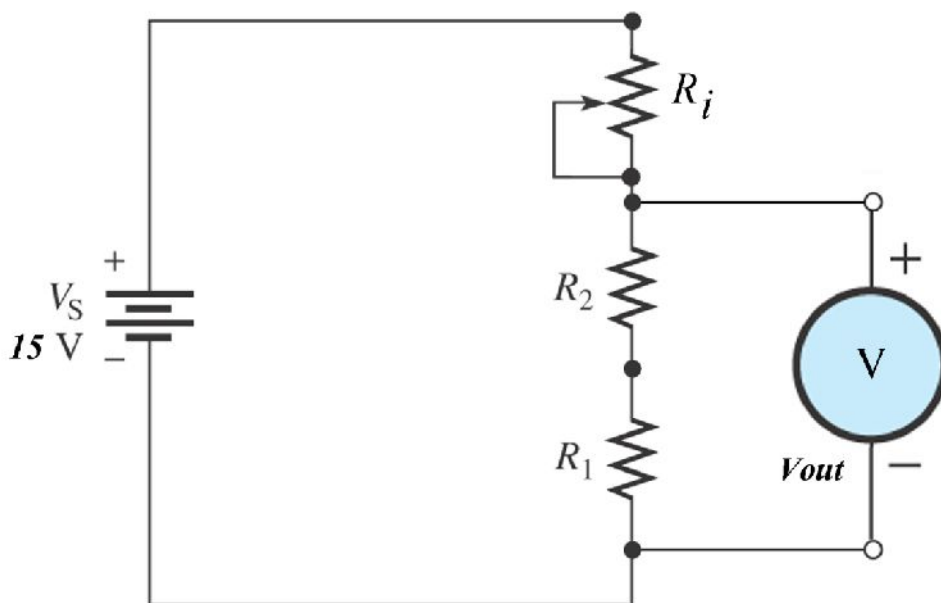


1.  $V_S = 10V$ ,  $R_{pot} = 1K = 1000$ .  
 $V(\ ) = 5V$ .



2.  $R_{32}$ ,  $R_{32}$ ,  $R_{32}$ .  
 3.  $V(\ ) = 9V$ ,  $V(\ ) = 2.5V$ .

4.  $V_S = 15V$ ,  $R_i$ ,  $R_1, R_2, R_i$ ,  $V_{out} = R_1 + R_2$ .

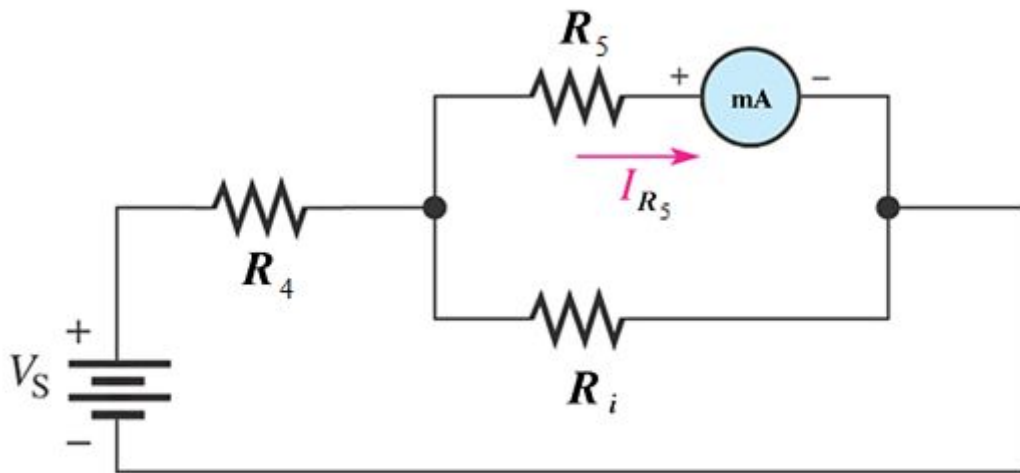


5.  $R_i$ ,  $i=3,4$  5. ,  $V_{out}$   $R = R_1 + R_2$   $\mu$

6.  $V_{out}$

:  $\mu$   $\mu$

7.  $R_i$ ,  $V_S = 12V$ ,  $R_4, R_5, R_i, V_S$ ,  $I_{R_5}$ ,  $R_5$ .



8.  $R_i$ ,  $i=1,2$  3. ,  $I_{R_5}$ ,  $R_5$ ,  $\mu$

$R_5$ ,  $R_i$  ( $=V_s / [R_4 + (R_5 // R_i)]$ ),  $\mu$   $\mu$  ,  $\mu$   $\mu$  .

9.  $I_{R_5}$