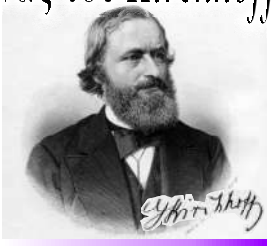
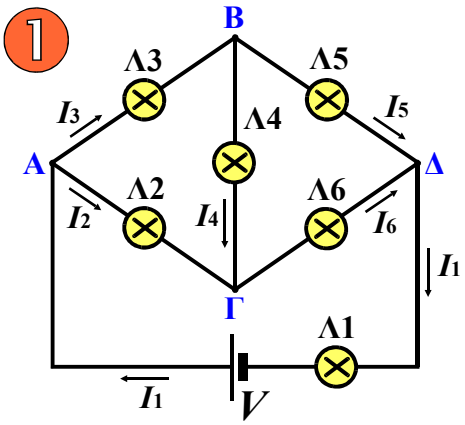
Φυσική Β΄ Λυκείου
ΓΕΝΙΚΗΣ ΠΑΙΔΕΙΑΣ

ΑΣΚΗΣΕΙΣ III
1ος & 2ος κανόνας του Kirchhoff



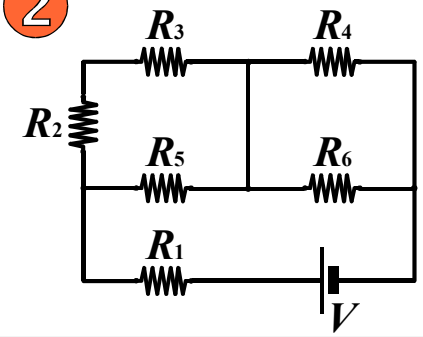
1ος κανόνας Kirchhoff

1



$I_1 = 30\ A$
$I_2 = 20\ A$
$I_6 = 10\ A$
$I_3 = \ ?$
$I_4 = \ ?$
$I_5 = \ ?$

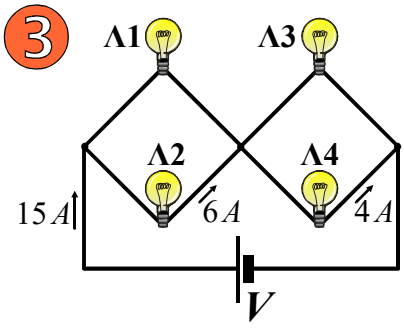
2



$I_{R1} = 10\ A$
$I_{R2} = 4\ A$
$I_{R6} = 1\ A$

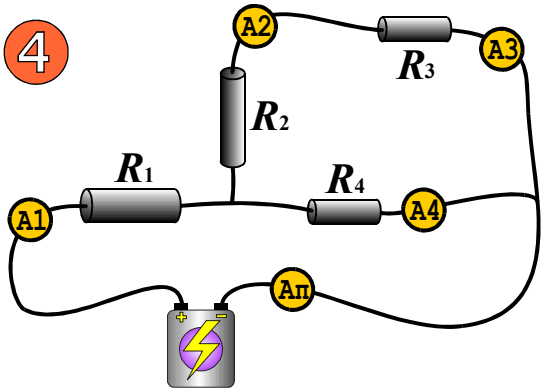
Να βρεθούν τα υπόλοιπα ρεύματα

3



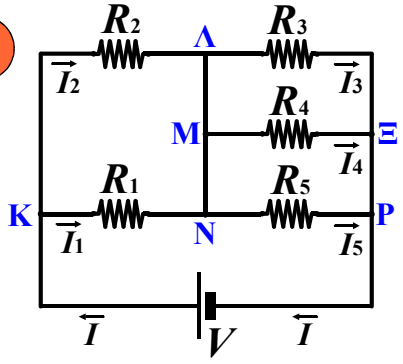
Να βρεθούν τα υπόλοιπα ρεύματα

4



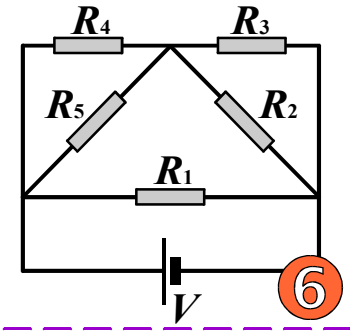
$A1 = \ ?$
$A2 = \ ?$
$A3 = 2\ A$
$A4 = 4\ A$
$A\pi = \ ?$

5



$I = 10\ A$ $I_1 = \ ?$
$I_2 = 2\ A$ $I_4 = \ ?$
$I_3 = 6\ A$ $I_{\Lambda M} = \ ?$
$I_5 = 3\ A$ $I_{MN} = \ ?$
$I_{\Xi P} = \ ?$

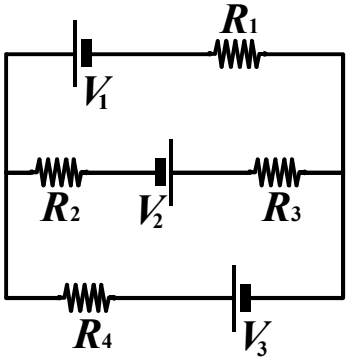
6



$I_{R4} = 2\ A$
$I_{R5} = 5\ A$
$I_{\pi\eta\gamma\acute{\eta}\varsigma} = 10\ A$
$I_{R1} = \ ?$
$I_{R2} = \ ?$
$I_{R3} = 1\ A$

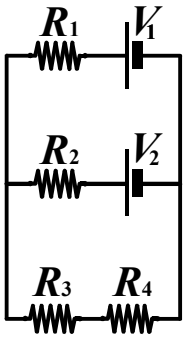
2ος κανόνας Kirchhoff

7



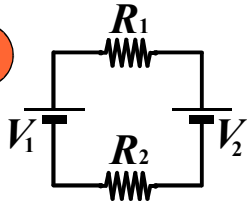
$V_1 = 20\ V$ $R_1 = 5\ \Omega$ $I_1 = \ ?$
$V_2 = 20\ V$ $R_2 = 2\ \Omega$ $I_2 = \ ?$
$V_3 = 10\ V$ $R_3 = 3\ \Omega$ $I_3 = \ ?$
$R_4 = 5\ \Omega$

8



$V_1 = 10\ V$ $R_1 = 2\ \Omega$
$V_2 = 20\ V$ $R_2 = 2\ \Omega$
$R_3 = 4\ \Omega$
$R_4 = 6\ \Omega$
$I_1 = \ ?$ $I_2 = \ ?$ $I_3 = \ ?$

9



$V_1 = 100\ V$
$V_2 = 40\ V$
$R_1 = 20\ \Omega$
$R_2 = 10\ \Omega$
$I = \ ?$ $I' = \ ?$ $(...V_2 \xrightarrow{\circlearrowleft} \gamma 1)$

$V_1 = V_3 = 10\ V$
$V_2 = \ ?\ (\pm ?\mp)$
$R_1 = 10\ \Omega$
$R_2 = 15\ \Omega$
$R_3 = 5\ \Omega$
$I = 0{,}5\ A$

10