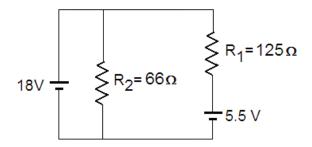
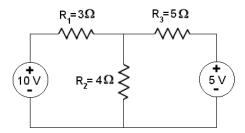
## Physics II

## Kirchhoff

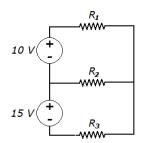
**Problem 1.-** Determine the magnitude and direction (up or down) of the current through R<sub>1</sub>.



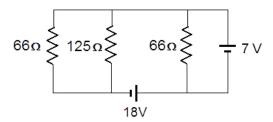
**Problem 2.-** We want to find the current through the resistors  $R_1$ ,  $R_2$  and  $R_3$ . Write down the equations that you need and solve the problem.



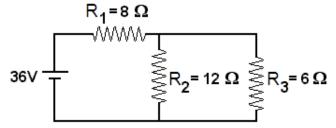
**Problem 3.-** Write down the equations to find the currents in the resistors. The values of the resistances are  $R_1$ =10 $\Omega$ ,  $R_2$ =15 $\Omega$  and  $R_3$ =12 $\Omega$ .



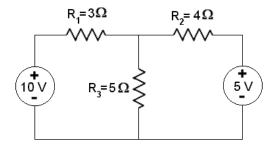
**Problem 4.-** Find the current through the  $125\Omega$  resistor.



**Problem 5.-** Find the current through R<sub>3</sub> in the circuit shown:



**Problem 6.-** Find the current through the resistors  $R_1$ ,  $R_2$  and  $R_3$ .



**Problem 7.-** Determine the magnitude and direction (left or right) of the current through R<sub>1</sub>.

**Problem 8.-** In the following circuit, determine values of I<sub>ps</sub>, I<sub>1</sub>, I<sub>2</sub>, V<sub>A</sub> and V<sub>B</sub>.

