Physics 112

Preliminary Laboratory Questions Experiment 3

Solution of Networks

Kirchoff’s rules and Superposition Principle

1. Comment on the statement “ Kirchoff’s rules are direct consequences of elementary conservation laws”.

This is because the tow theorems of kiechof's low are a results of tow conservation laws . In fact , Loop theorem is just the principle of conversation of energy as applied to electric circuits . And Junction theorem is just the principle of conversation of charge applied to electric circuits .

1. Suppose that in Fig. 1 in the manual;

Ε1=8 V , Ε2=10 V, R1=2 KΩ, R2= 3 KΩ and R3=6 KΩ;

Find using Kirchoff’s rules the current flowing on each resistance.

Solving these tow equations we get :

3- As in question 2, but by using the superposition Principle.

1. To find :
2. To find :
3. To find :