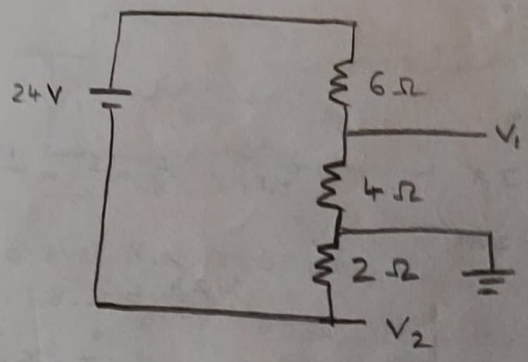

$R_{eff} = 12\ \Omega$

$I = \frac{V}{R} = \frac{24}{12} = 2\ A$

$V_1 = IR_1 = 2 \times 6 = 12\ V$
$V_2 = IR_2 = 2 \times 4 = 8\ V$
$V_2 = IR_3 = 2 \times 2 = 4\ V$

V_1 with respect to ground.

$V_1 = \frac{2}{24} \times \frac{4}{12} = 8\ V$

$V_2 = \frac{2}{24} \times \frac{2}{12} = -4\ V$ (V_2 is at negati

V_1 is positive with respect to ground.

V_2 is negative with respect to ground.

9/24 DEFINITIONS :

NETWORK THEOREM :

* There are certain theorems which when applied to the solutions of electric networ the theorem simplify the network and rende their analytical solutions very easily. These theorems can also be applied to AC network where the impedance replace the ohmic resistance of DC systems.

i) Circuit :

* A circuit is a closed conducting path through which an electric current either flow or about to flow.

ii) Linear circuit :

* A Linear circuit is one whose parameters are constant with time also they do not change with voltage or current. and the circuit obeys ohm's Law.

iii) Non-Linear circuit :

* It is the circuit whose parameters change with voltage or current.

iv) Bilateral circuit :

* It is the circuit whose properties or characteristics are the same in both directions.

v) Unilateral circuit :

* It is the circuit whose properties or characteristics changes depending on the direction.

vi) Electric Network :

* A combination of various electric elements connected in any manner is called an Electric Network.

vii) Passive Network :

* It is the network which contains no source of emf.

viii) Active Network :

* It is the network which contains one or more than one source of emf.

ix) Node : 

* A node is a point in a circuit where two or more circuit elements are connected together.

x) Branch : 

* It is the part of a network which lie between two nodes.

xi) Loop : 

* It is a closed path in a circuit in which no element or node is encountered more than once.

xii) Mesh : 

* It is a loop that contains no other loop within it