Module I: DC Circuits 6 Hrs

Basic circuit elements and sources; Ohms law, Kirchhoff's laws; Series and parallel connection of circuit elements; Source transformation; Node voltage analysis; Mesh current analysis; Maximum power transfer theorem

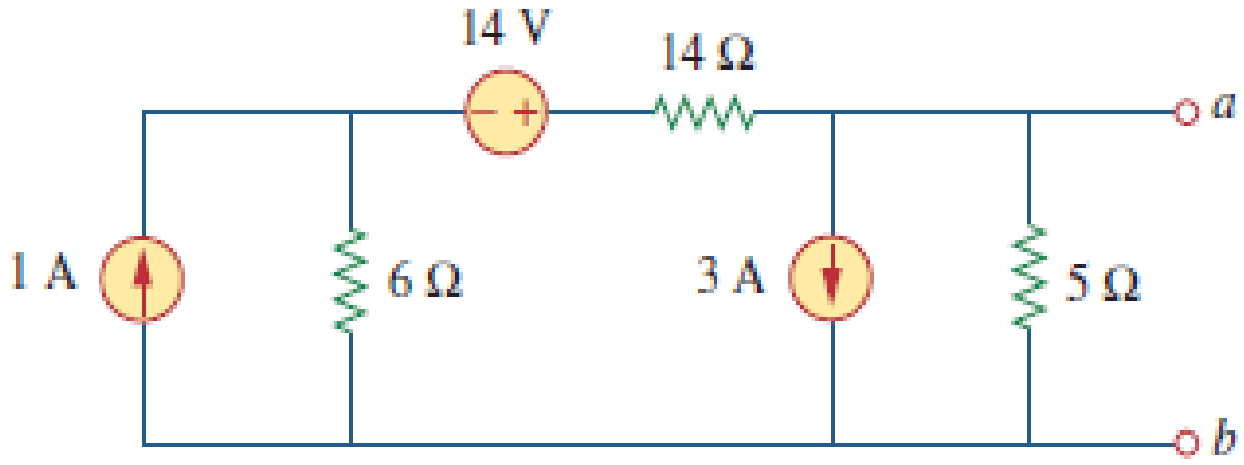
CO1:

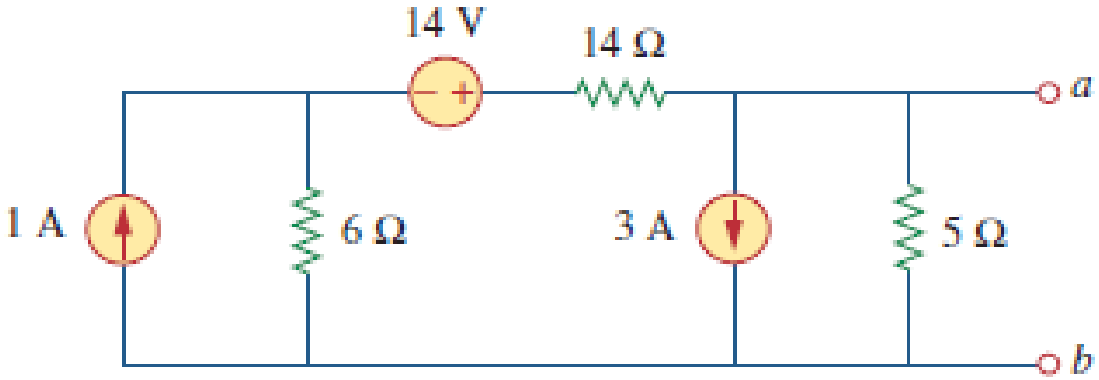
Evaluate DC and AC circuit parameters using various laws and theorems

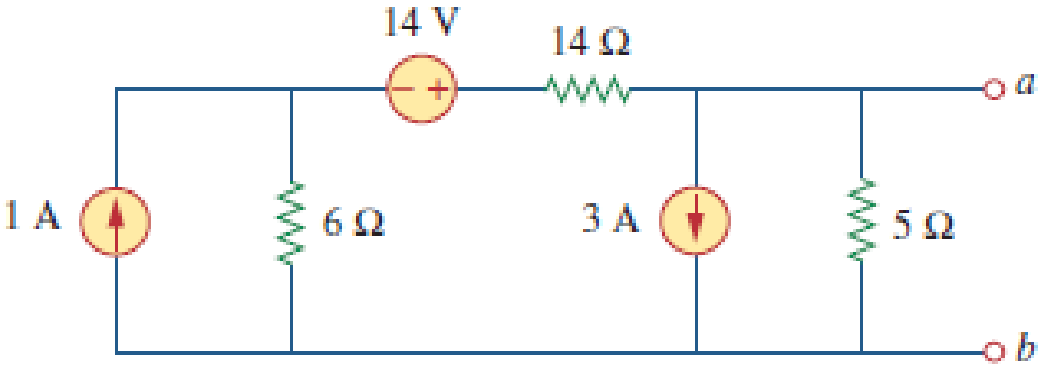
Module 1

Evaluate DC circuit parameters using various laws and theorems

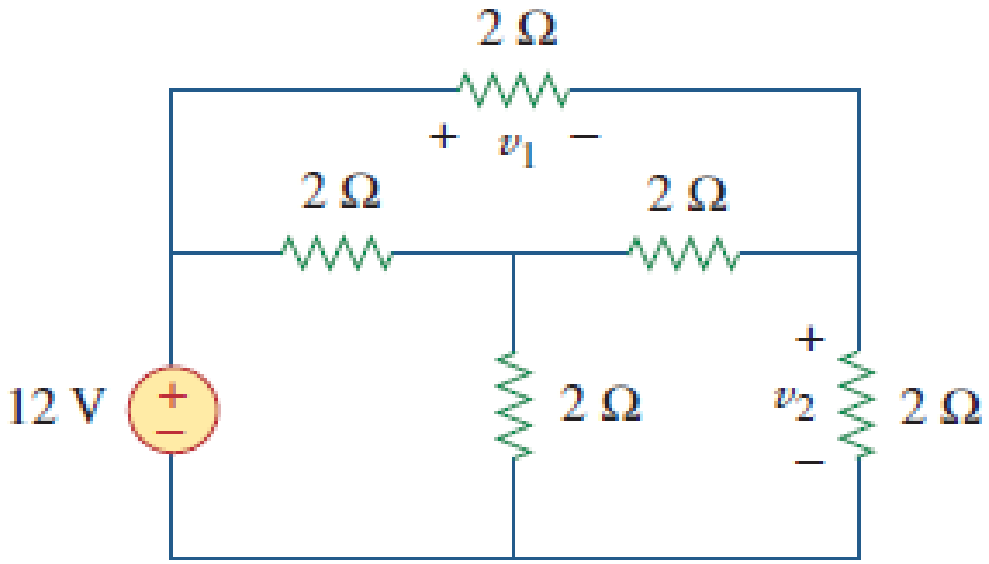
Find the Thevenin's equivalent circuits at terminals a-b of the circuit shown in Fig. and find the maximum power.

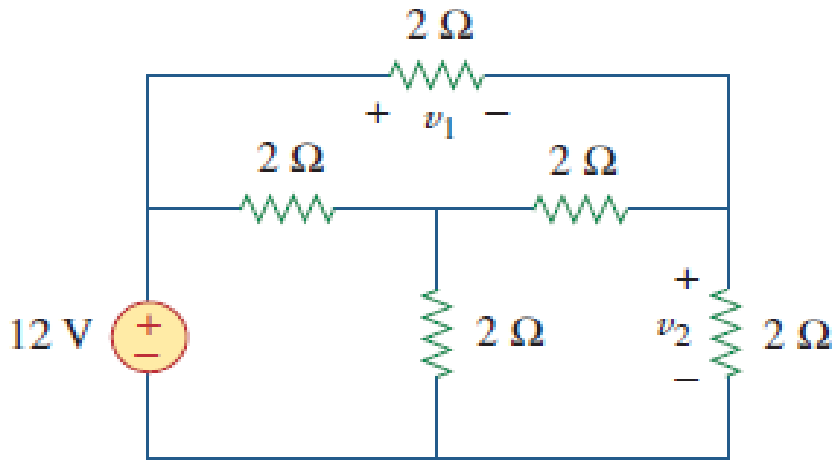



14 V
14 Ω
a
1 A
6 Ω
3 A
5 Ω
b


14 V
14 Ω
a
1 A
6 Ω
3 A
5 Ω
b

Determine v_1 and v_2 using mesh analysis and verify using nodal analysis




2 Ω
+ v_1 −
2 Ω
2 Ω
12 V
2 Ω
+
v_2
−
2 Ω