Electrical Power Engineering Fundamentals

Departamento de Ingeniería Eléctrica. Universidad Carlos III de Madrid

Module 2. Analysis of DC Circuits. Week 3

Exercise 1. In the following circuit:

a) Find the current i and the voltage Ux using the mesh current method and/or the node-voltage method

b) Calculate the power generated by sources and check the power balance.

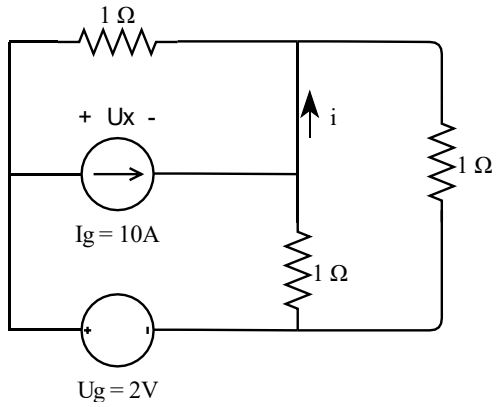

Figure 1 DC circuit 1

Exercise 2. In the following circuit:

a) Find the current i and the voltage Ux using the mesh current method and/or the node-voltage method

b) Calculate the power generated by sources and check the power balance.

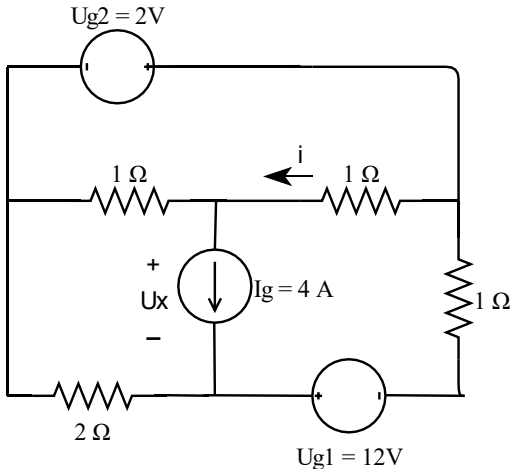

Figure 2 DC circuit 2

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Exercise 3. In the following circuit:

a) Find the currents i1 and i2 and the voltages Ux1 and Ux2 using the mesh current method and/or the node-voltage method.

b) Calculate the power generated by sources and check the power balance.

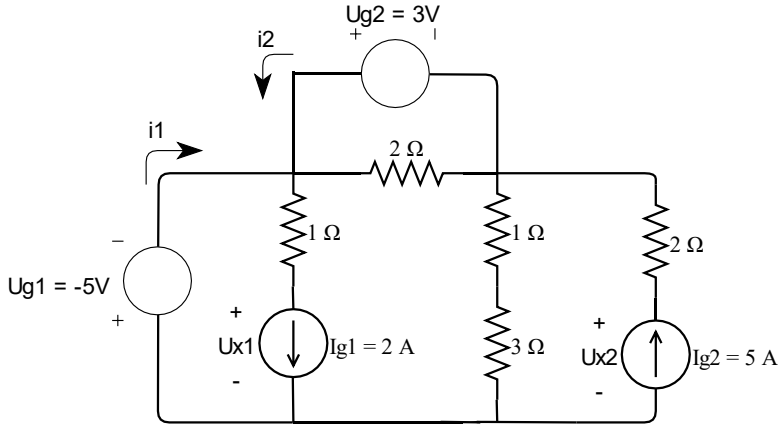

Figure 3. DC circuit 3

Exercise 4. In the circuit below:

a) Find the currents i1 and i2 and the voltages Ux1 and Ux2 using the mesh current method and/or the node-voltage method.

b) Calculate the power generated by sources and check the power balance.

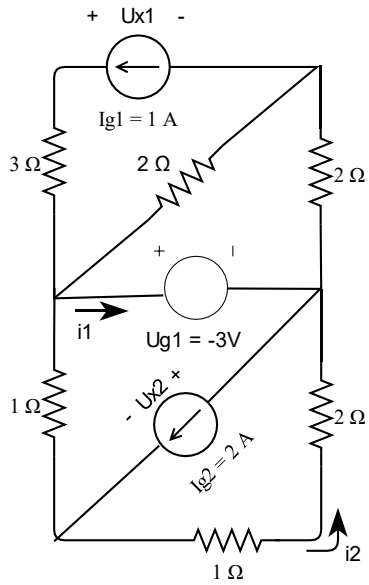

Figure 4. DC circuit 4

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