

# Electrical Power Engineering Fundamentals

Departamento de Ingeniería Eléctrica. Universidad Carlos III de Madrid

Module 2. Analysis of DC Circuits. Week 4

**Exercise 1.** Find the Thévenin and Norton equivalents between nodes A and B for the following circuit.

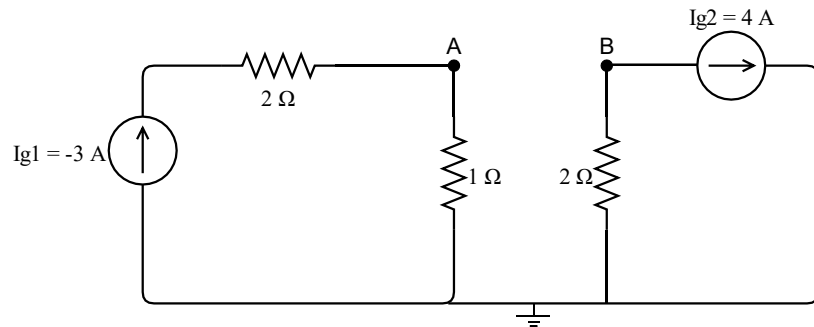


Figure 1 DC circuit 1

**Exercise 2.** Find the Thévenin and Norton equivalents between nodes A and B for the following circuit.

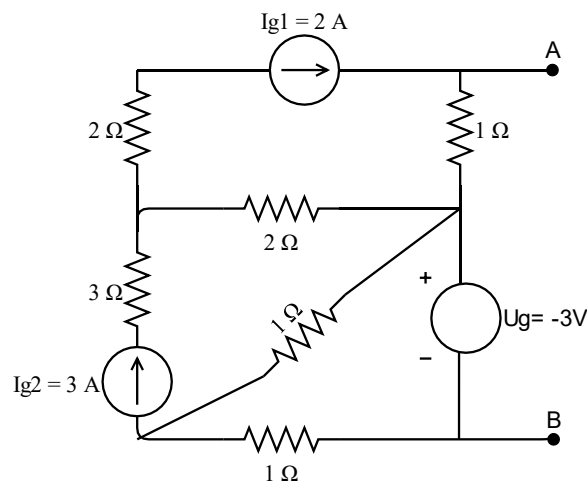


Figure 2 DC circuit 2

**Exercise 3.** In the following circuit:

- a) Using the Thévenin equivalent, find  $I_r$  for different values of  $R$ :  $2\ \Omega$ ,  $3\ \Omega$  and  $8\ \Omega$ .

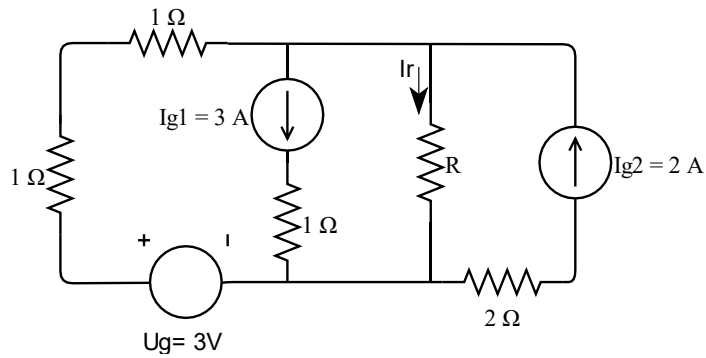


Figure 3. DC circuit 3

**Exercise 4.** Find the Thévenin and Norton equivalents between nodes A and B for the following circuit.

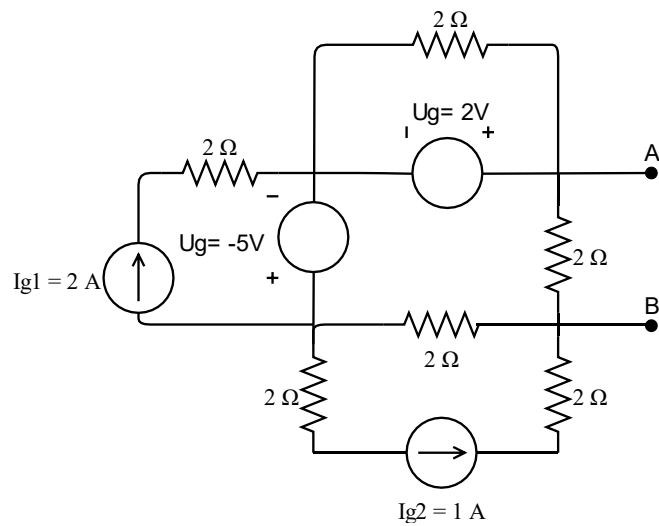


Figure 4. DC circuit 4