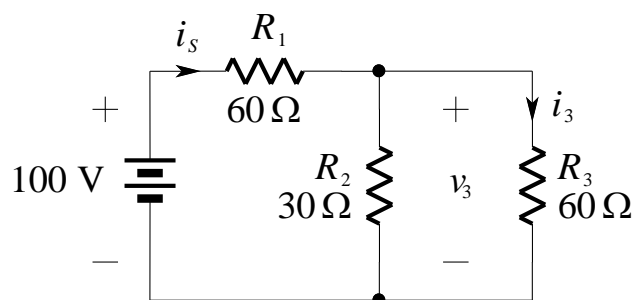


### 3 Nodal Analysis and Mesh Analysis

1.

Consider the circuit shown below:

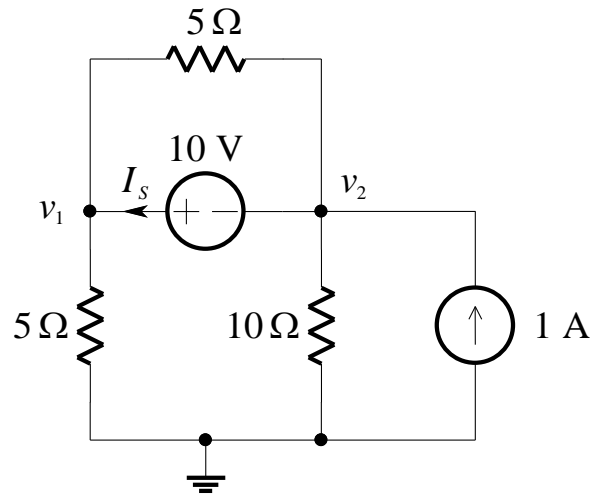


- Use the voltage division principle to find the voltage  $v_3$ .
- Find the source current,  $i_s$ .
- Use the current division principle to find the current  $i_3$ .
- Perform a nodal or mesh analysis to check your answers.

## 3.2

2.

Find the nodal voltages in the circuit below, and hence the value of  $I_s$ .



3.

Find the current in each resistor in the circuit below.

