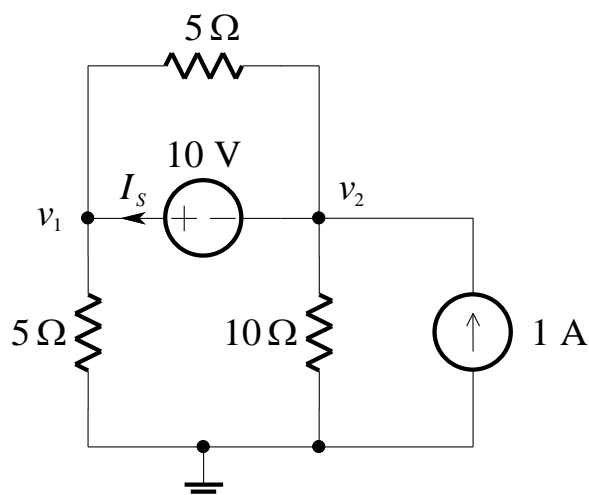


4 Thévenin's Theorem and Norton's Theorem

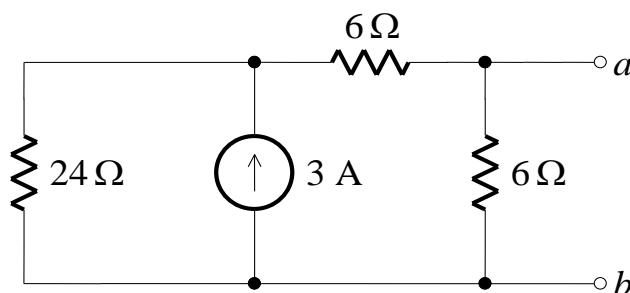
1.

Find the value of I_s using the principle of superposition.



2.

Consider the circuit shown below:

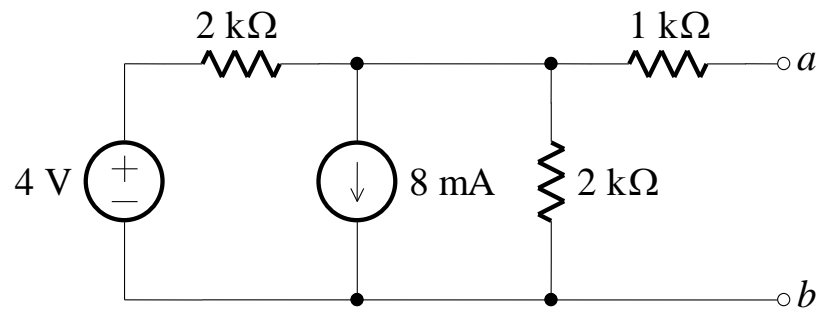


- Find the Thévenin and Norton equivalent circuits.
- For what value of load resistance is the power maximum?
- Find the maximum power that can be delivered to a load.

4.2

3.

Consider the circuit shown below:



- (a) Find the Thévenin resistance, R_{Th} .
- (b) Find the Thévenin voltage, V_{Th} .
- (c) Find the Norton current, I_N .
- (d) Draw the Thévenin and Norton equivalent circuits.
- (e) Find the load current if a $4\text{ k}\Omega$ load is connected to the terminals.
- (f) For what value of load resistance is the power maximum?
- (g) Find the maximum power that can be delivered to a load.