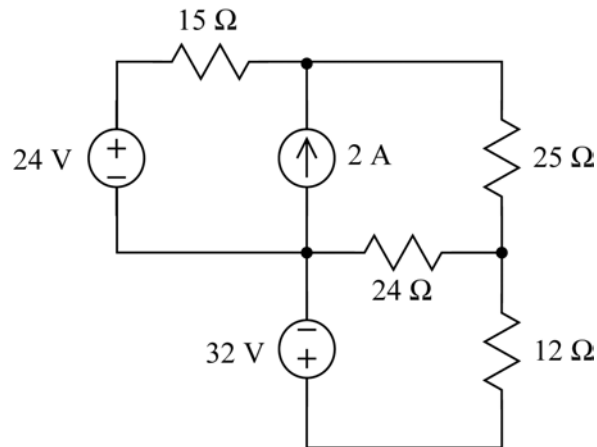
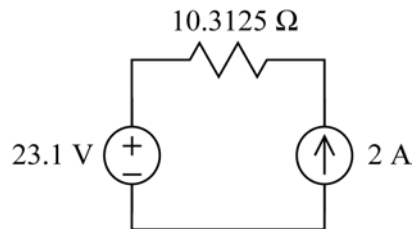


A Plan for Solving Circuit Problems

Suppose I want to determine the value of the power supplied by the current source in this circuit.



I'll need to determine the value of the voltage across the current source. Suppose that I could simplify the circuit until it looked like this



Here “simply” means that I’ve reduced the size of the circuit **without changing the value** of the power supplied by the current source.

The power supplied by the current source in the small circuit is given by

$$p = [23.1 + 2(10.3125)]2 = 87.45 \text{ W}$$

The power supplied by the current source in the small circuit is equal to the power supplied by the current in the large circuit.

The power supplied by the current source in the large circuit is 87.45 W.

Of course this all depends on finding a way to simplify the large circuit.