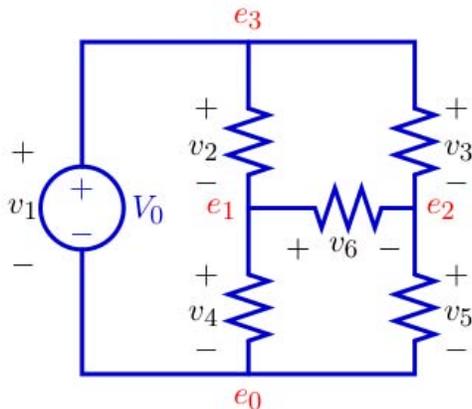


Problem Wk.8.1.1: Describing circuits

Read the Software Lab 8 Handout before doing these problems.

Part 1: Equations

Complete the `EquationSet` for the simple circuit below, following the first example in the handout.



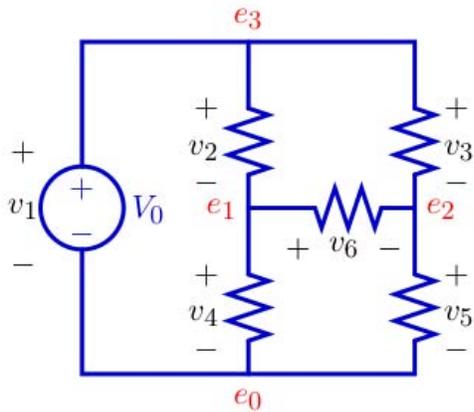
- Use e_0, e_1, e_2, e_3 for the voltages at the nodes.
- Use $i_1, i_2, i_3, i_4, i_5, i_6$ as the currents. Assume each current is defined to flow from the positive to the negative terminal of the corresponding component, i_k corresponds to v_k .
- All the resistors except R_4 have value 100 ohms; R_4 , which is the resistor between nodes e_1 and e_0 , has value 10 ohms.
- The source voltage, v_0 , is 10 volts.
- e_0 is ground.

You can debug this in idle using the file `swLab08Work.py`

```
ce = le.EquationSet()
```

Part 2: Connections

For the simple circuit below, complete the description using the `circ.Circuit` class.



- Use e_0 , e_1 , e_2 , e_3 for the voltages at the nodes.
- All the resistors except R_4 have value 100 ohms; R_4 , which is the resistor between nodes e_1 and e_0 , has value 10 ohms.
- The source voltage, v_0 , is 10 volts.

You can debug this in idle using the file `swLab08Work.py`

```
ce1 = circ.Circuit([])
```

MIT OpenCourseWare
<http://ocw.mit.edu>

6.01SC Introduction to Electrical Engineering and Computer Science
Spring 2011

For information about citing these materials or our Terms of Use, visit: <http://ocw.mit.edu/terms>.