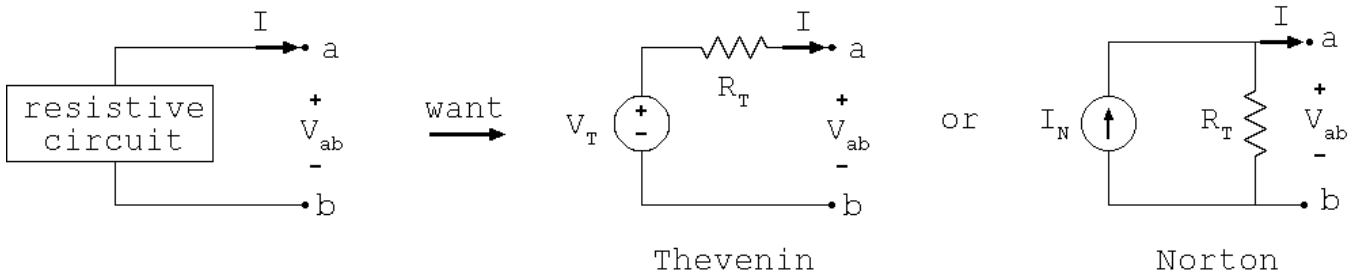
Lecture 8, Monday, January 31, 2022

- Thevenin and Norton equivalent circuits



  - Thevenin's voltage, V_T, is open-circuit voltage
  - Norton's current, I_N, is short-circuit current
  - V_T and I_N are a linear combination of the independent sources in circuit
    - If there are no independent sources, then $V_T = I_N = 0$
  - Thevenin's resistance, R_T, is equivalent resistance
    - Remove all independent sources
    - If can simplify into a single resistor, that is R_T
    - If cannot, then use *test signal* method:
      - inject 1A into terminal a
      - measure the voltage from terminal b to a
      - divide that voltage by 1A to get R_T

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Lecture 8, continued from previous page...

* Even though the test signal method adds some steps that I_N would not need, the resulting circuit after source suppression might be significantly simpler to solve.

– Also,

$$V_T = R_T I_N$$

