Basic Elec. Engr. Lab

ECS 204

Dr. Prapun Suksompong

prapun@siit.tu.ac.th

Exam Instructions (1/3)

- Four time slots
  - group a: 9:30 – 10:30 AM
  - group b: 10:40 – 11:40 AM
  - group c: 1:30 – 2:30 PM
  - group d: 2:40 – 3:40 PM
- Arrive at least 10 minutes early
- **Do not enter the lab before your exam time**.
- Bench numbers for taking exam will be randomly assigned by the instructor.

Exam Instructions (2/3)

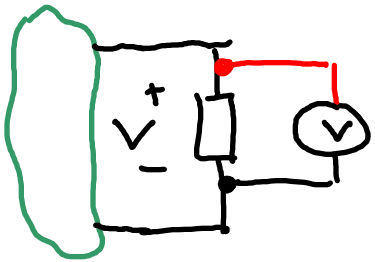
- Closed book. Closed notes.
- ***No calculator***.
- The TAs will not help you debug your circuit.
- For the problems that ask for TA's signatures, lack of the signature(s) means ***no credit for the whole part***.
  - Having the signatures mean that the values recorded are the same as the values measured.
  - These signatures do not guarantee that you have the correct answers.
- When possible, record *at least two decimal places* from the DMM. Do not write 12 mA when you see 12.00 mA on the DMM's display.

Exam Instructions (3/3)

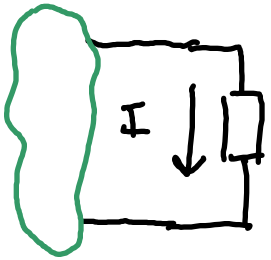
- **Read the instructions and the questions carefully**.
- Allocate your time wisely.
- Some easy questions give many points.
- Units are important.
- Do not forget to write your **first name and the last three digits of your ID** on each page of your examination paper, starting from page 2.
- Clean your desk/bench before you leave the exam room.

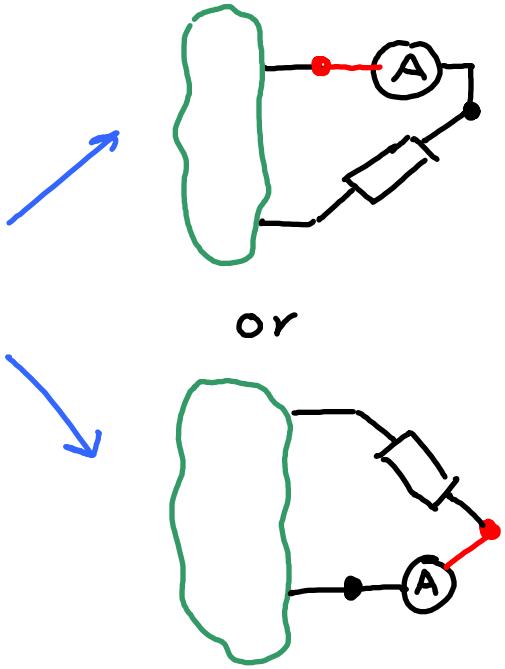
DMM

Voltage

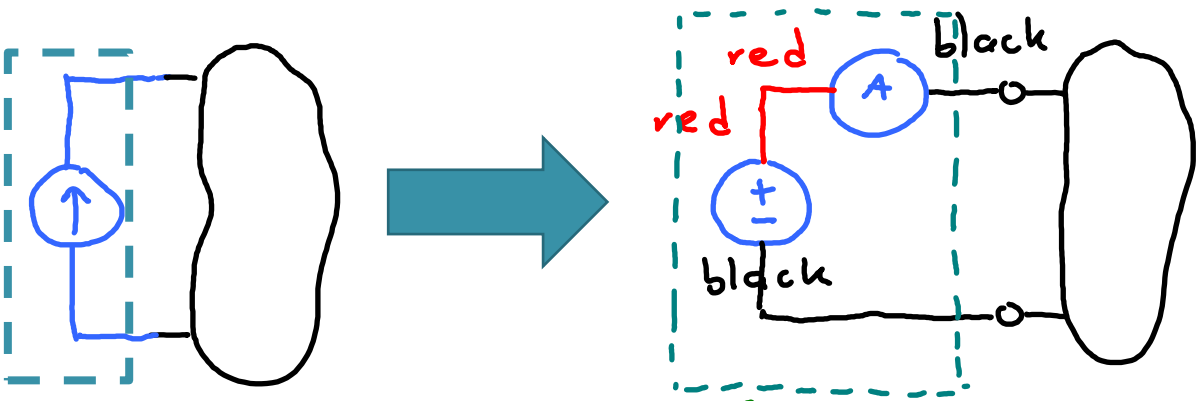


Current





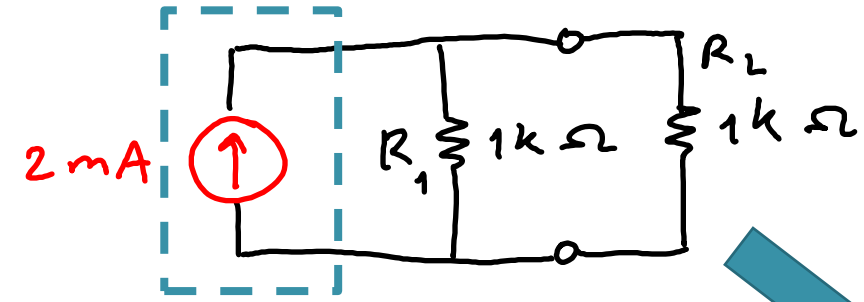
Constructing “Fake” current source



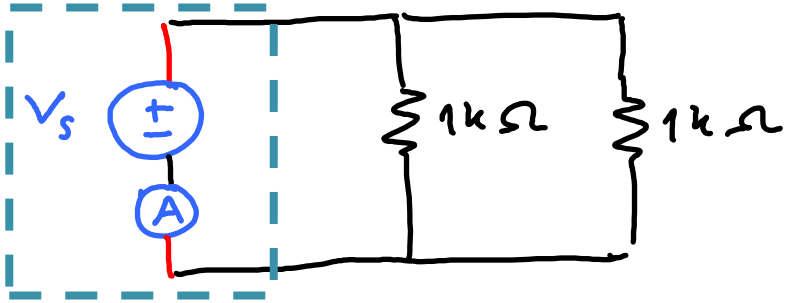
Act as a fake current source.

Example 1/2

suppose you want to construct the following circuit



Use

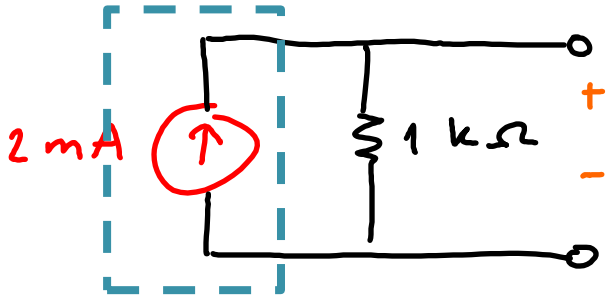


Adjust V_s to make 2mA shows up on (A).

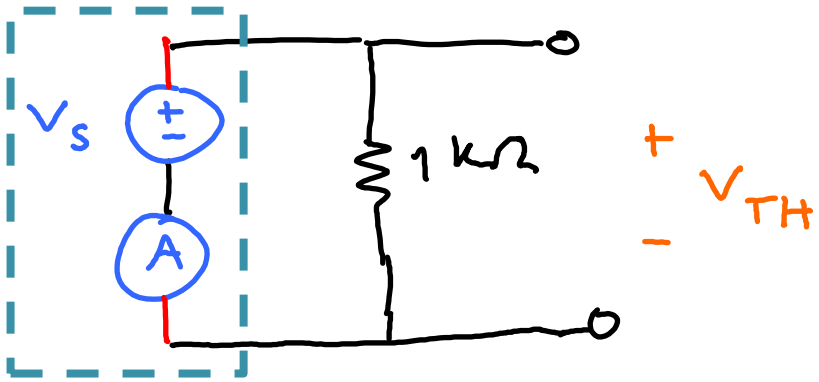
($V_s = 1V$ is required to make this happens.)

Example 2/2

suppose we want to find the Thevenin equivalent at R_L using R_L as a load, then need to measure the open circuit voltage of



Again, we use



Note that 1V will only gives 1mA

So, need to readjust V_s to 2V to get 2mA @ (A)