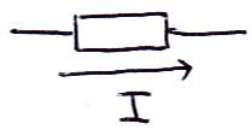
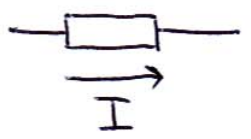


Lecture 2

Power



instantaneous power

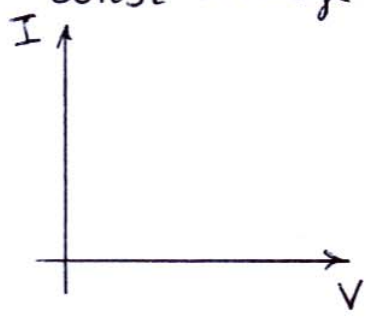


② Voltage source

or

or

ideal voltage source holds const voltage no matter what



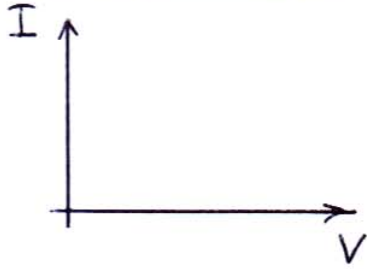
Practical vott. source

voltage may not be const

③ Current source

or or

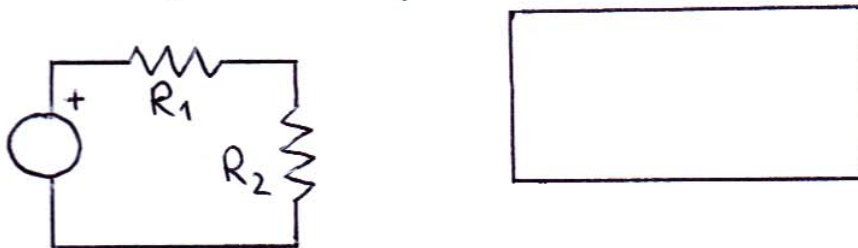
Ideal current source supplies const current no matter what



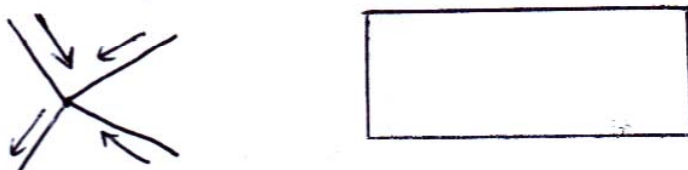
Practical current source

Circuit analysis

Kirchhoff's voltage law (KVL)

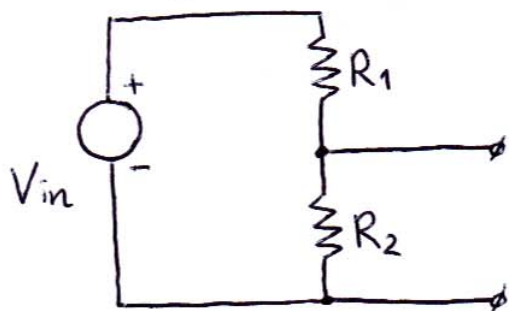


Kirchhoff's current law (KCL)

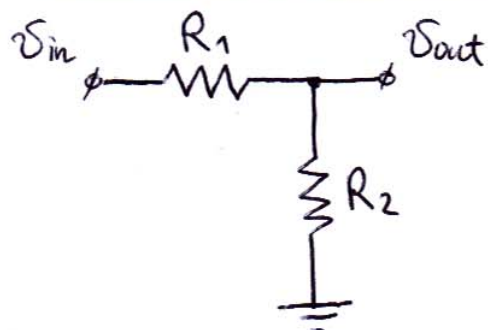


KVL & KCL are completely general

Voltage divider



A word on notations



Circuit simplifying techniques

Superposition

Given a _____ circuit containing several i_s, v_s , the total i, v at a given point is algebraic sum from _____ source.

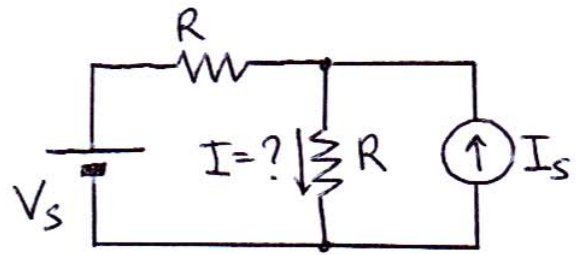
step 1.

step 2.

step 3.

Ex.

Find I?

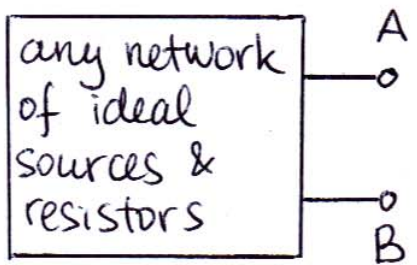
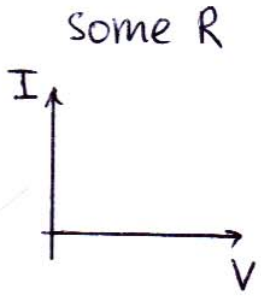
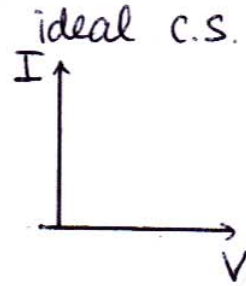
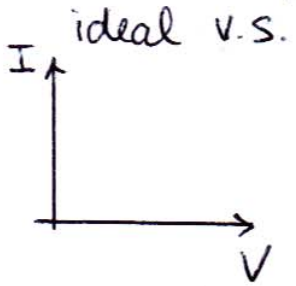


① open I_s

② short V_s

③ sum

Thevenin equivalent



any combination of _____ circuit elements
 with two output terminals may be replaced with
 _____ and _____

$V_{TH} =$

$R_{TH} =$