No. Summry

- $e = -1.6 \times 10^{-19}$ - $i = dq/dt$ - $Q = it$

- $W = v.q$ Power ⇒ I^2R or V^2/R or $I.V$

- KVL low ⇒ $\sum V = 0$

- KCL low ⇒ $\sum I_{inside} = \sum I_{out}$

- $\frac{1}{R_{eq}} = \frac{1}{R_1} + \frac{1}{R_2}$ or $\frac{1}{R_q} = R_1 + R_2 / R_1 R_2$

- $i = i_1 + i_2$ - $i = V/R$

- in Nodal Anlysis = $I = V_{higher} - V(Lower) / R$

- for super position we kill ind. sources ① accept one.

[V → short circut] , [I → open circut]

- How to get thev. theron equ :-
  1. cut the Load.
  2. kill all the ind. sources.
  3. Calculate R. thev.
  4. reconnect the indp. Sources.
  5. Find Vthev = V open circut.
  6. draw thev. equ ..

smile

Scanned with CamScanner

No. sammry

- Nortons eq. ⇒ $R_N = R_{theV}$.

- If $R_L = R_{theV}$ we Reach Max power.

- $P_{Max} = V_{th}^2 / 4R_L$ ← power max Low.

capacitors Low :-

- $C = \epsilon_0 A / d$
  - A: Area of the plane
  - d: distance between Palate
  - ϵ_0: permittivity (Air)

- $q = C \cdot V$
  - $V_c = \frac{1}{C} \int i(t)\,dt$

- $P = i \cdot V$
  - $W = \frac{1}{2} C V^2$

- in DC-ckt the $i_C / DC = 0$

- capacitor series :-

- $\frac{1}{C_t} = \frac{1}{C_1} + \frac{1}{C_2} + \frac{1}{C_3} \ldots$
  - $q_1 = q_2 = q_3$

or $C_T = C_1 \cdot C_2 / C_1 + C_2$

$q_{tot} = C_{eq} \cdot V$

No. Summry

- Capacitor in Parallell :

- $C_T = C_1 + C_2 + C_3 \dots C_N$

- $V_1 = V_2 = V_3$

- $q_{tot} = q_1 + q_2 + q_3 \dots$