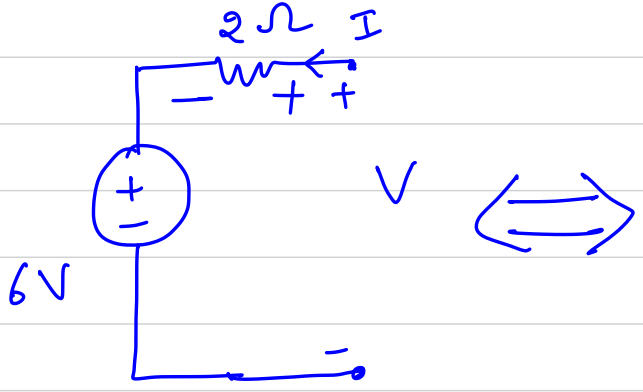
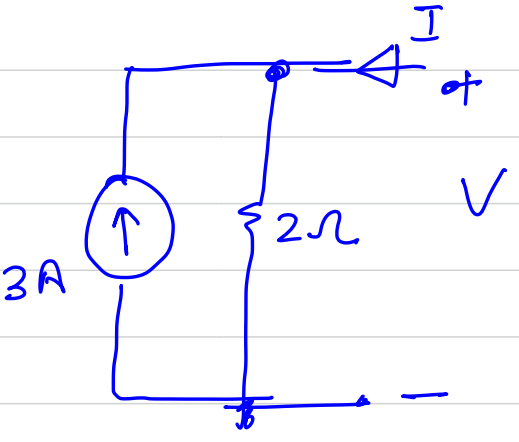
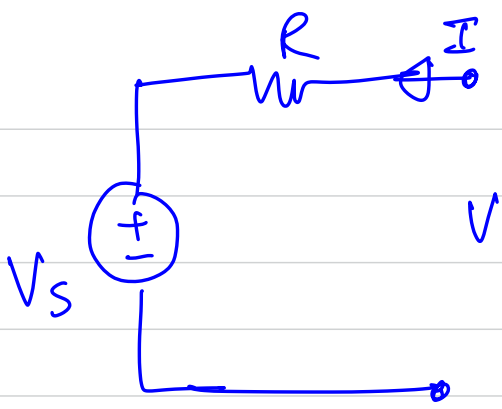


$\Longleftrightarrow$



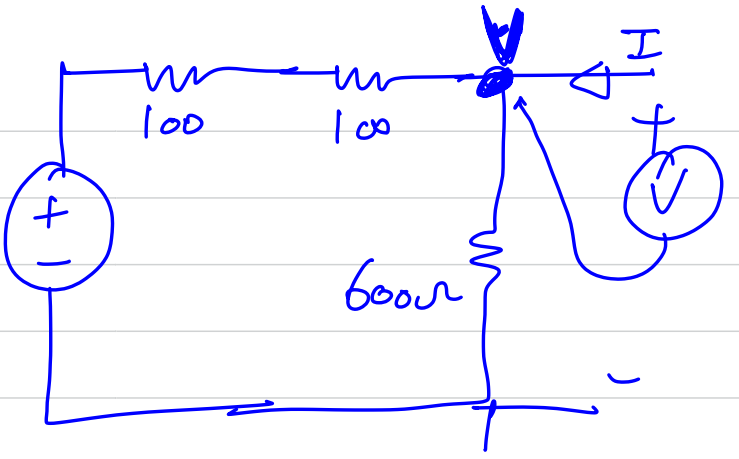
$V = 6 + 2I$

$V = 2(3 + I) = 6 + 2I$



$R = 15\Omega$

$V_S = 60V$



same

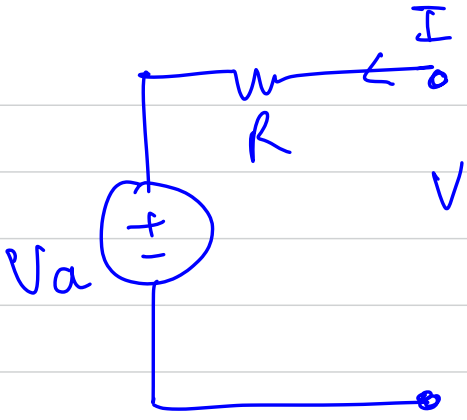
$$V = V_S + IR$$

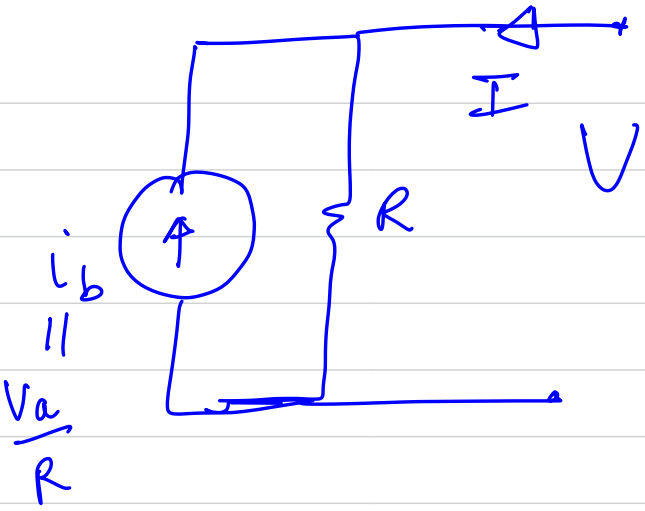
$$I = \frac{V - V_S}{R}$$

$$I = V/R - V_S/R$$

$$\frac{V}{600} + \frac{V - 80}{200} = I$$

$$\left[I = \frac{V}{150} - 0.4 \right]$$



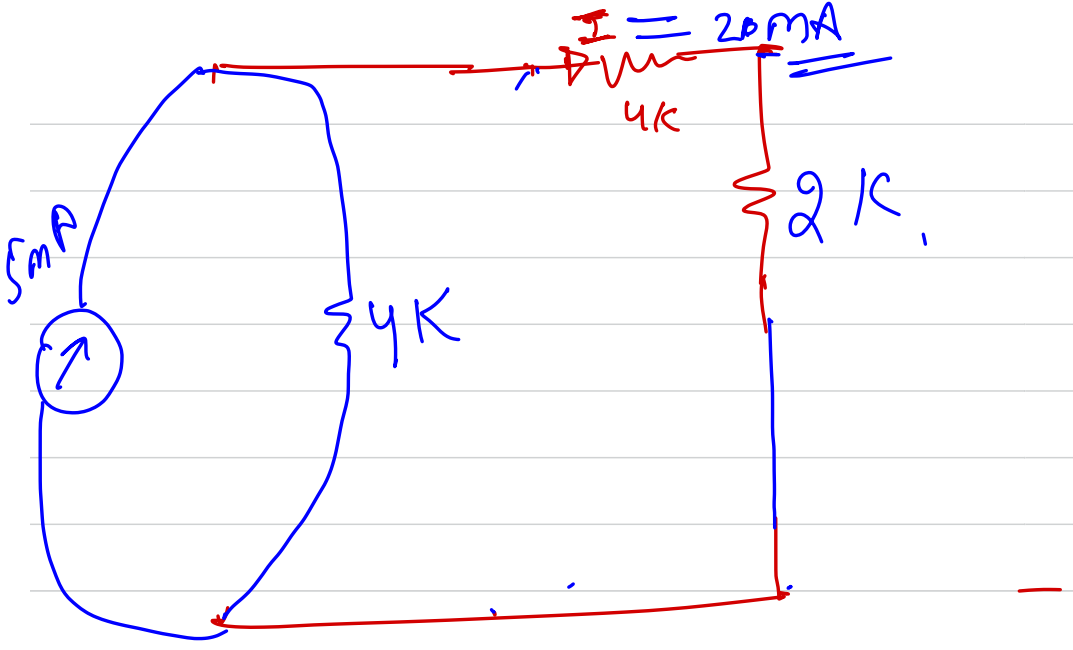


$$V = V_a + IR$$

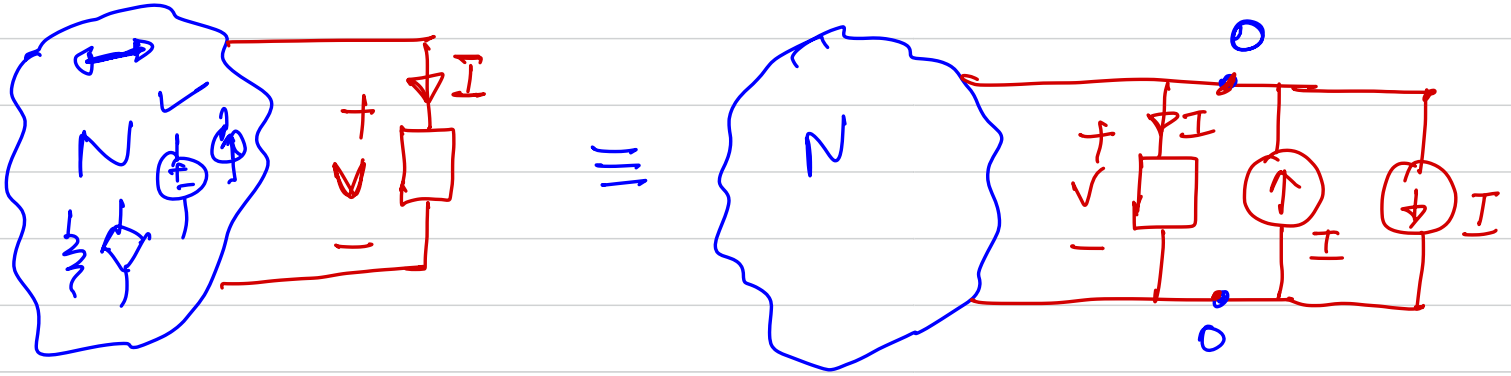
$$\frac{V}{R} = \frac{V_a}{R} + I$$

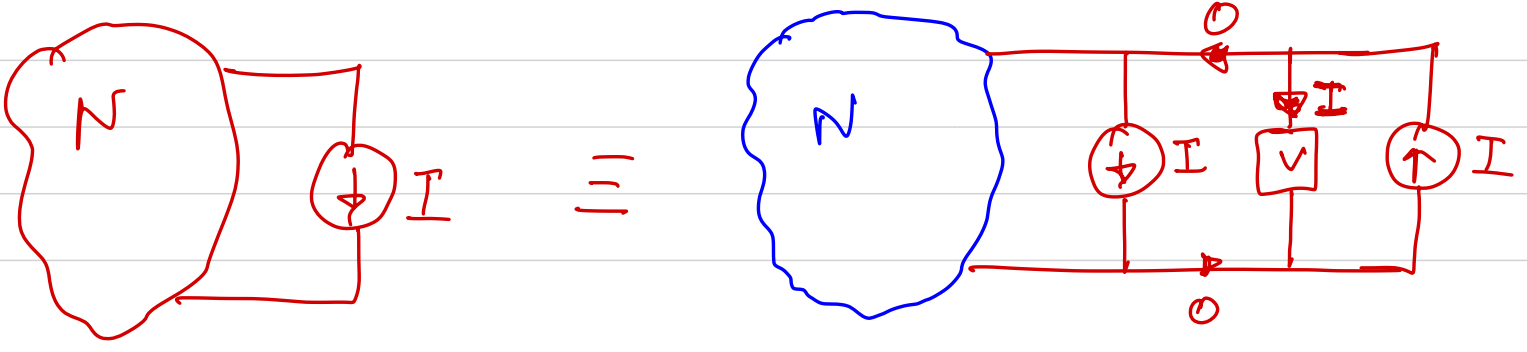
$$\frac{V}{R} = i_b + I$$

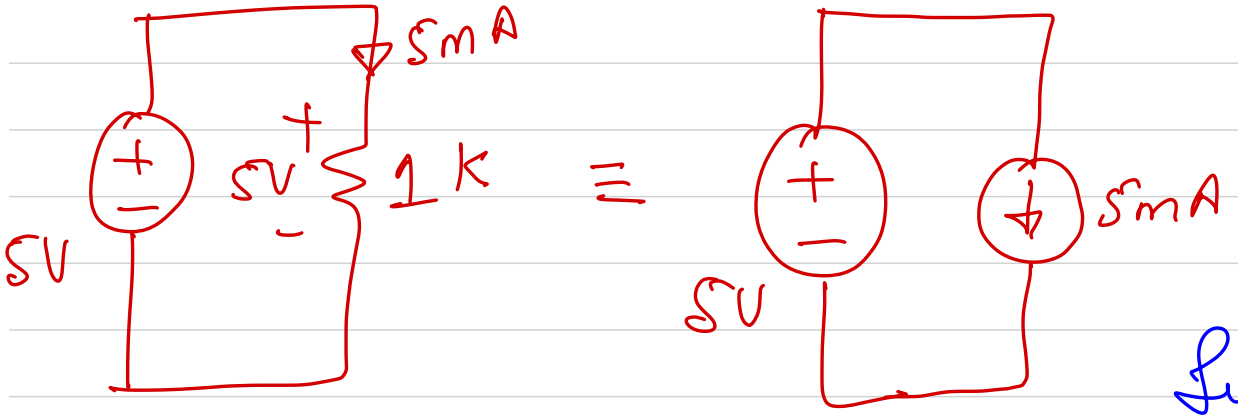
$$i_b = \frac{V_a}{R}$$


I = 20mA
4K
2K
5mA
4K

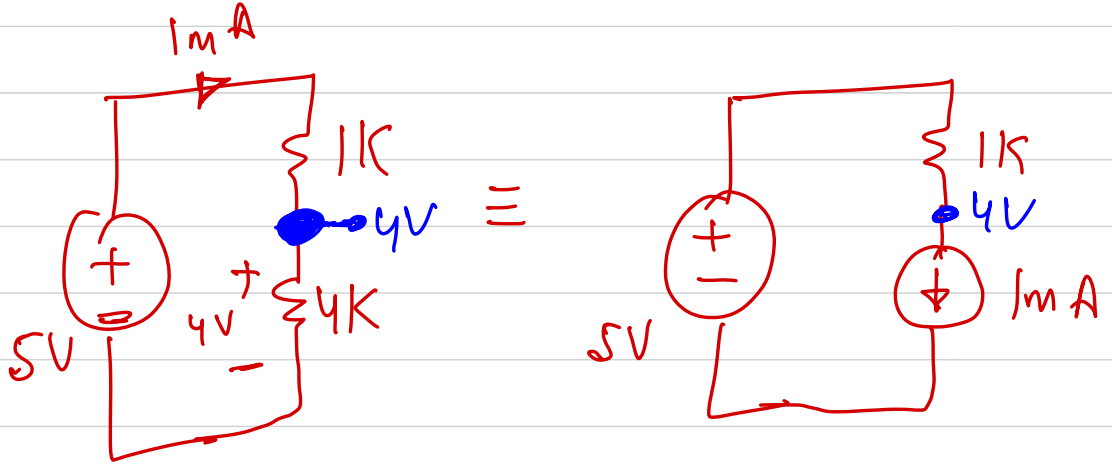
Thevenin Theorm

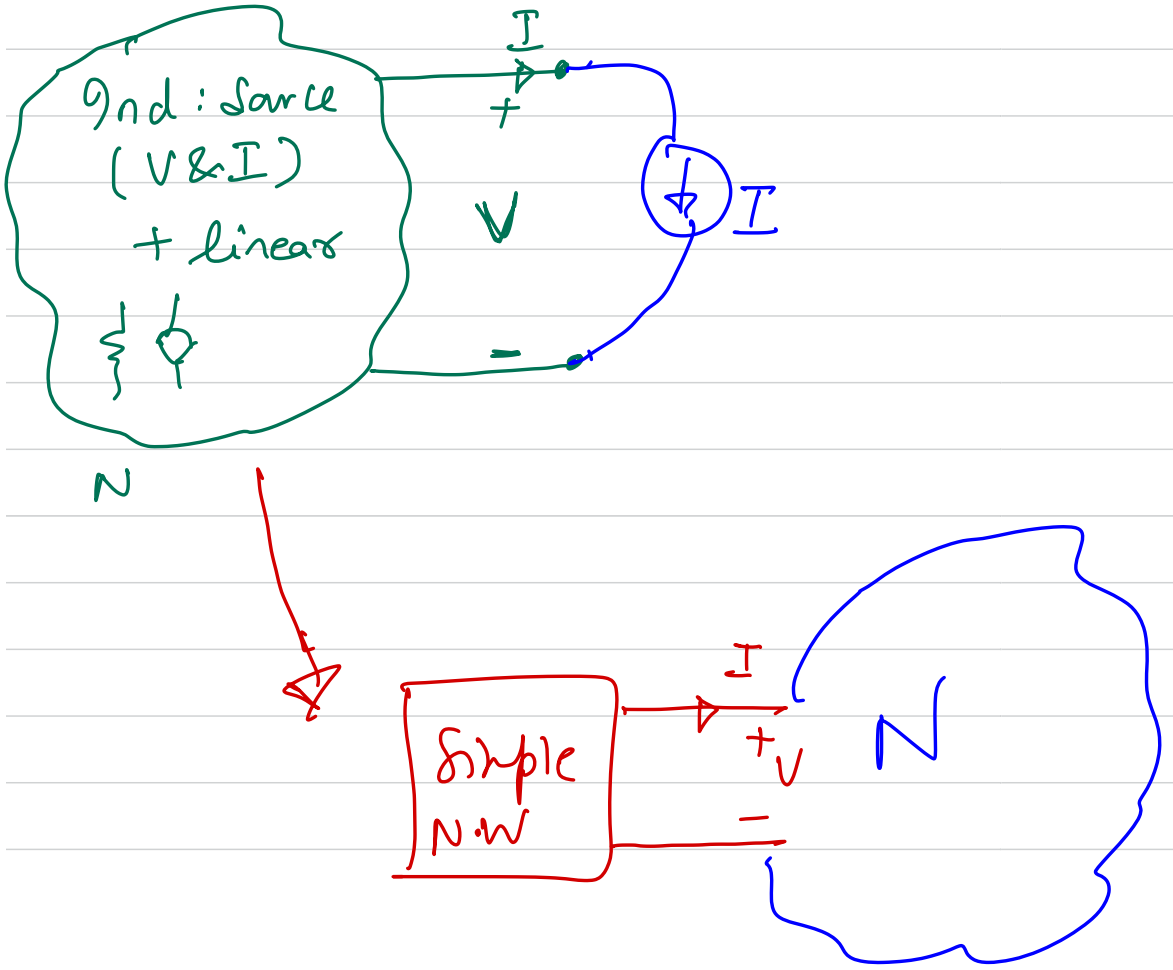


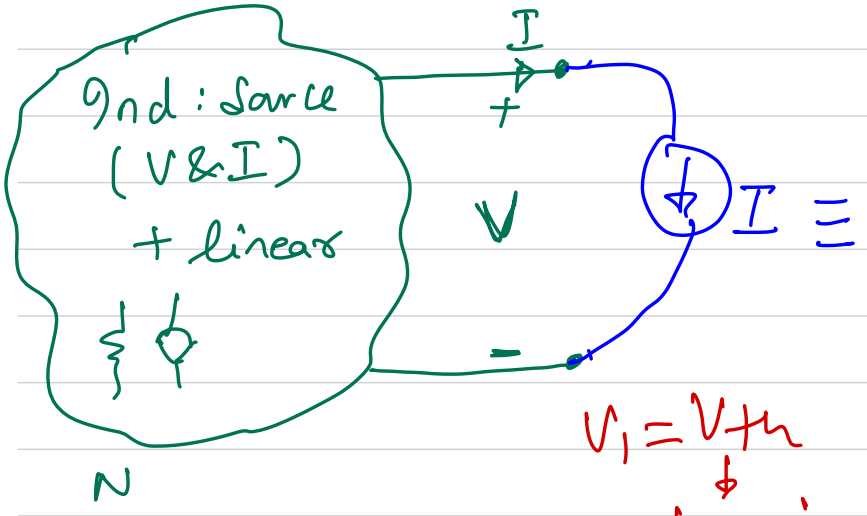




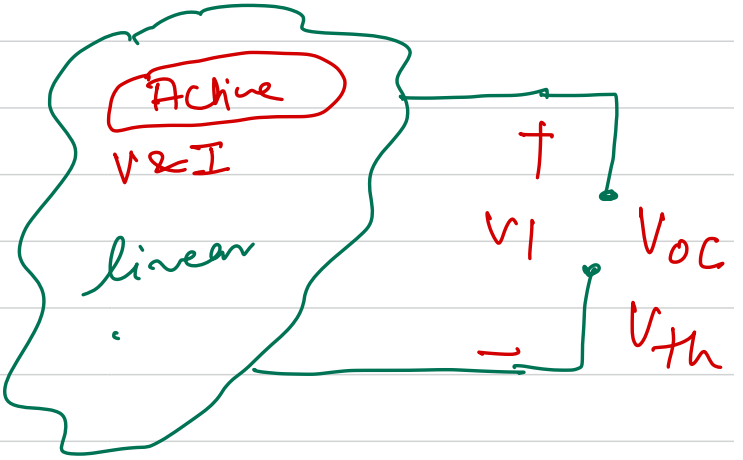
Substitution




Ind: Source
(V & I)
+ linear
I
+
V
−
I
N
Simple
N.W
I
+
V
−
N



$I \equiv$



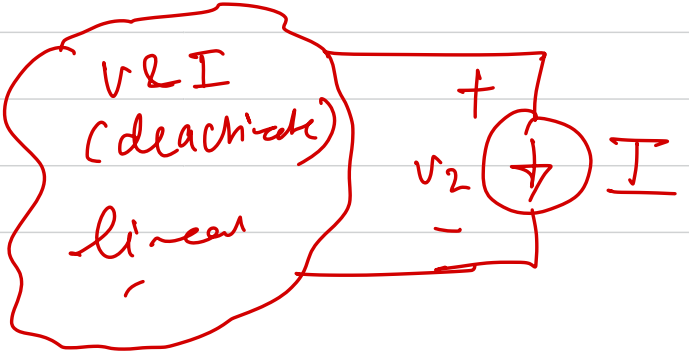
$V_1 = V_{th}$

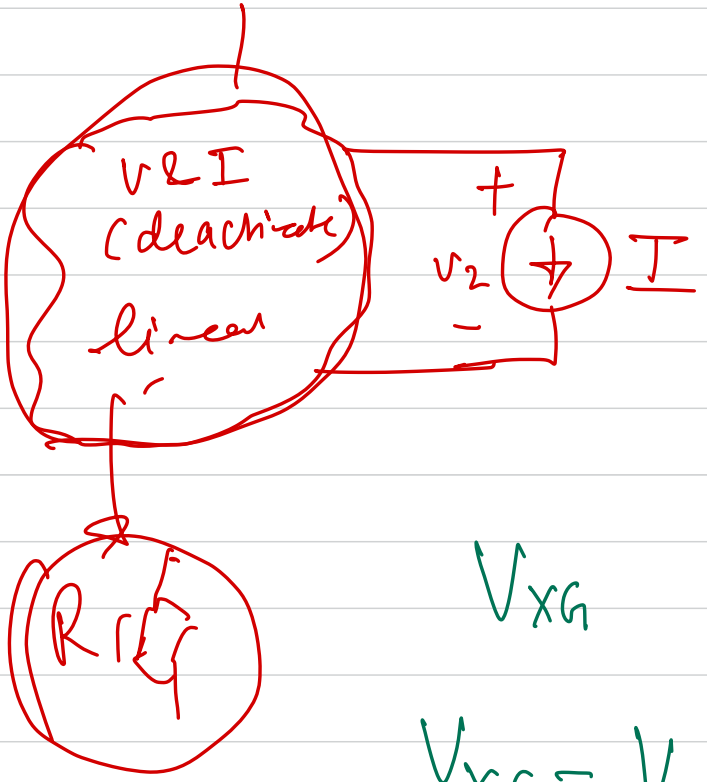
↓

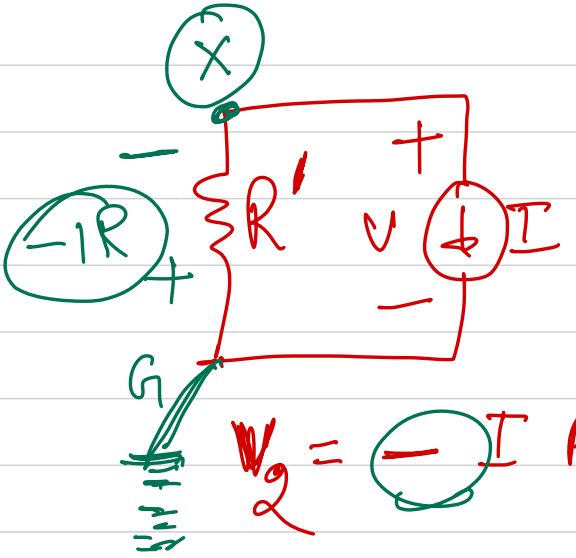
thevenin voltage

$V = V_1 + V_2$

+

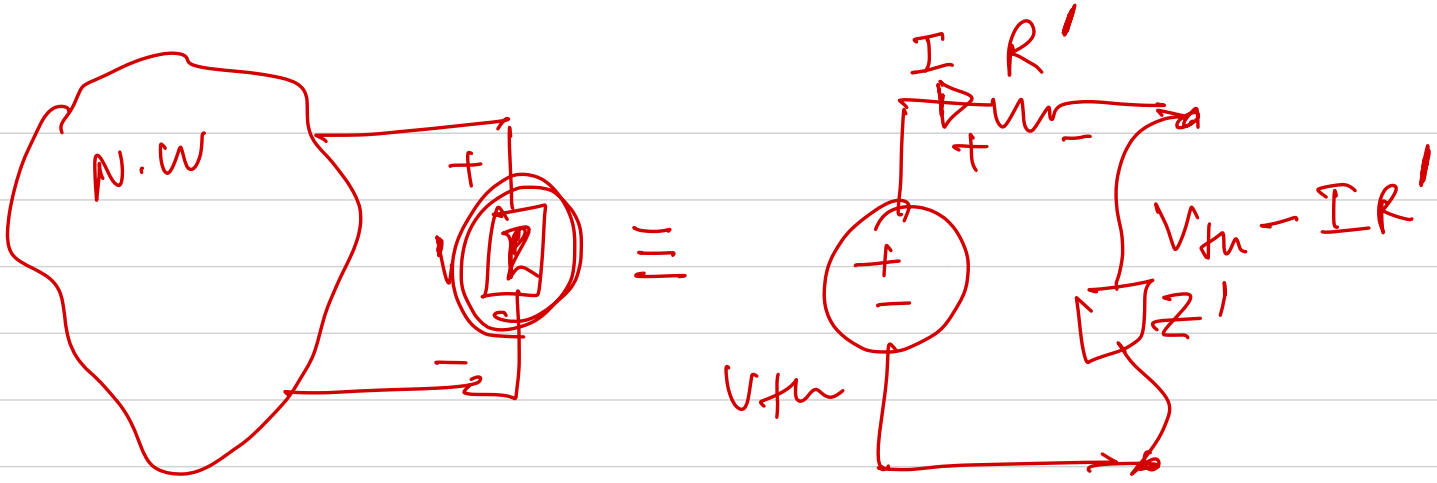






V_{XG} $\quad V_1 + V_2 = V_{th} - IR'$

$$V_{XG} = V_X - V_G$$


N.W
+
−
≡
I
R'
+
−
$V_{th} - IR'$
Z'
V_{th}