

$$i = \frac{v}{r} ; v = ir$$

$$P = i^2 r ; P = iv = \frac{v^2}{r}$$

$$eq = \frac{R_1 R_2}{R_1 + R_2}$$

$$R_{eq1} = 6 + 10 = 16 \Omega ; R_{eq2} = \frac{6 \times 16}{6 + 16} = 12.8 \Omega$$

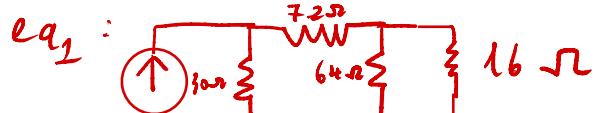
$$R_{eq3} = 12.8 + 7.2 = 20 \Omega$$

$$R_{eq4} = \frac{30 \times 20}{30 + 20} = 12 \Omega$$

$v_{parallel} = v_{series}$

$$v = ir = 5 \times 12 = 60V$$

$$P_{generated} = 5 \times 60 = 300W$$



$$i_{16\Omega} = \frac{38.4}{16} = 2.4$$

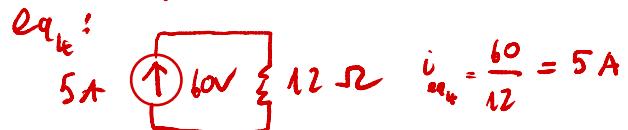


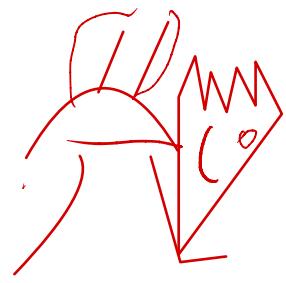
$$v_{7.2} = 3 \times 7.2 = 21.6V$$

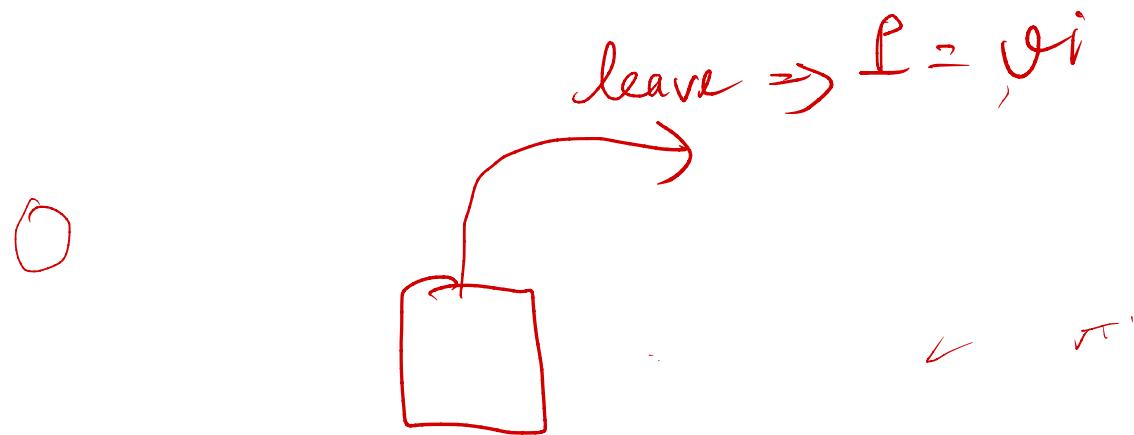
$$v_{12.8} = 3 \times 12.8 = 38.4V$$



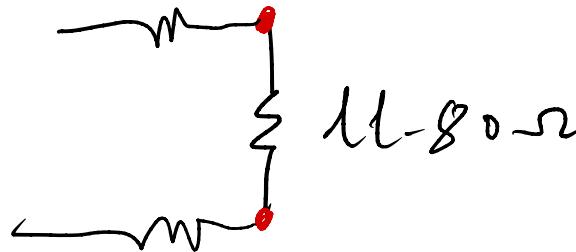
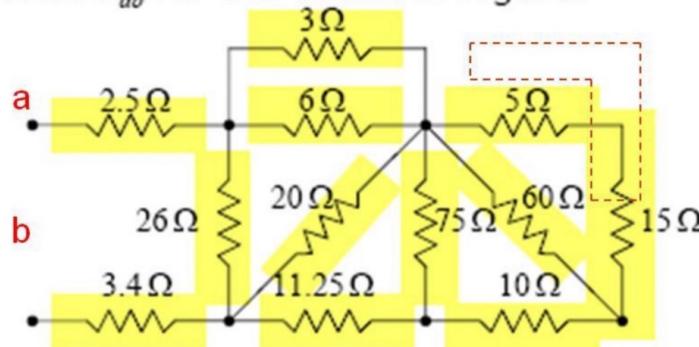
$$i_{eq4} = \frac{60}{12} = 5A$$







ance R_{ab} for the circuit in Figure.



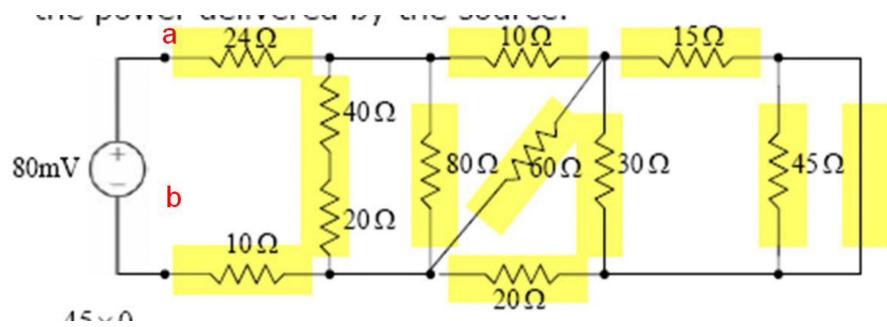
$$R_{eq_1} = 5 + 15 = 20 \quad R_{26\Omega} \parallel R_{eq_1} \Rightarrow R_{eq_2} = \frac{60 \times 20}{60 + 20} = 15 \Omega$$

$$R_{eq_3} = 10 + 15 = 25 \Omega \quad R_{75\Omega} \parallel R_{eq_3} \Rightarrow R_{eq_4} = \frac{75 \times 25}{75 + 25} = 18.75 \Omega$$

$$R_{eq_5} = 18.75 + 11.25 = 30 \Omega; \quad R_{20\Omega} \parallel R_{eq_5} \Rightarrow R_{eq_6} = \frac{20 \times 30}{20 + 30} = 12 \Omega$$

$$R_{eq_7} = 2 + 12 = 14 \Omega, \quad R_{26\Omega} \parallel R_{eq_7} \Rightarrow R_{eq_8} = \frac{26 \times 14}{26 + 14} = 9.1 \Omega$$

$$R_{eq_{10}} = 2.5 + 3.4 + 9.1 = 15 \Omega$$



nguồn mạch - đoàn mạch



dùng sai do nhầm

$$I_{0\max} = \frac{100V \times 1 \cdot 1 R_2}{1 \cdot 1 R_2 + R_1}$$

: mạch phân dòng

$$I_1 = I_s \frac{R_2}{R_1 + R_2}$$

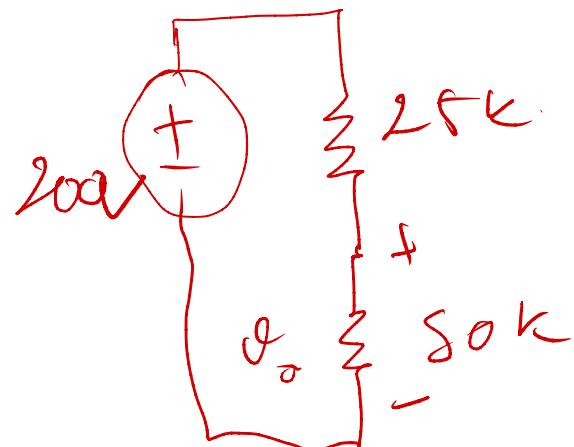
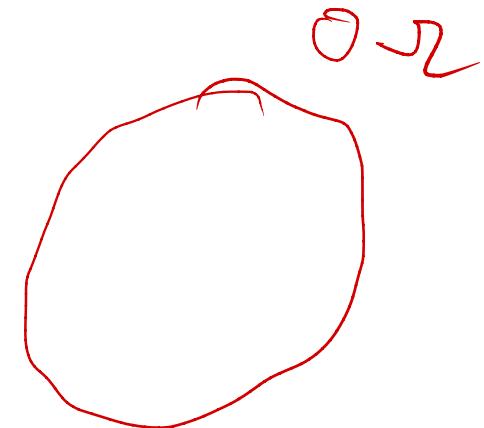


$$R_{eq} = k \cdot R$$

1

Load: tai

P_{max} when no load



Load is short $\Rightarrow f_{20}$

✓ Not important

METER TERMINALS

$$R = \frac{50 \text{ mV}}{1 \text{ mA}}$$

$$= 50 \Omega$$

\Rightarrow 3 more resistances

$$R_2 R_3 = R_1 R_x \\ \Rightarrow R_x = \frac{R_2 R_3}{R_1}$$

$R_1, 2, 3$ are known, R_x : unknown

A B

$$V_{AC} = V_{BC}$$

$$\Rightarrow V_s \times \frac{R_3}{R_3 + R_1} = V_s \times \frac{R_x}{R_x + R_2} \\ \Rightarrow R_x = \frac{R_2 R_3}{R_1}$$

D → Y

