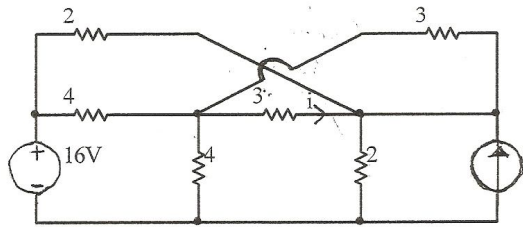


Taller 1

EC1251-Redes I
QUIZ I (15%)
 24-01-07

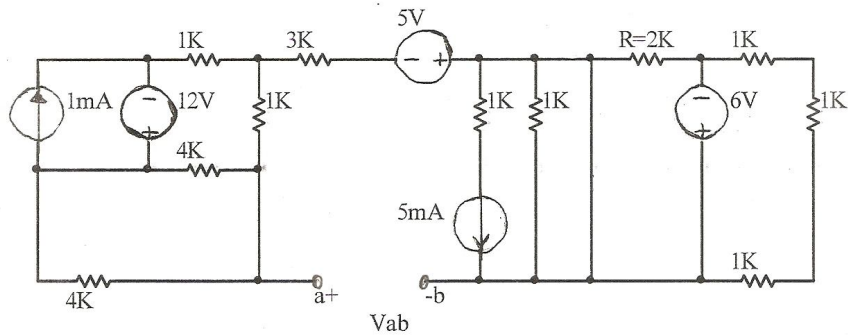
Nombres:
 Carnet:

1. En el circuito de la figura 1, halle el valor de la fuente de Corriente I, si $i=4A$ (7 pts.)



[V, A, Ω]

2. En el circuito de la figure, halle
 a) El voltaje V_{ab} (4 pts.)
 b) La potencia entregada por la fuente de 6V (4 pts.)

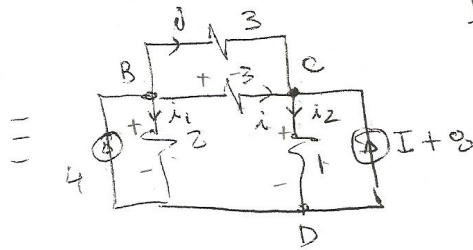
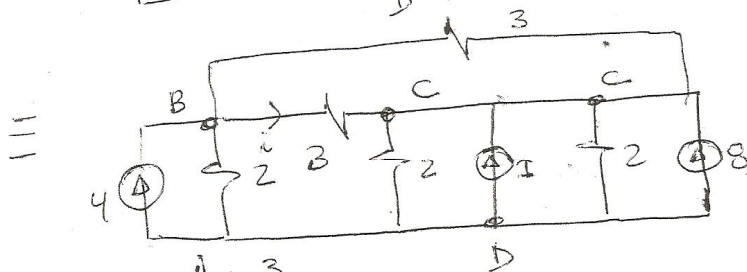
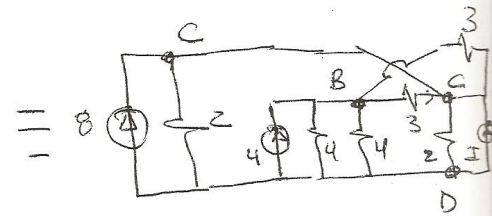
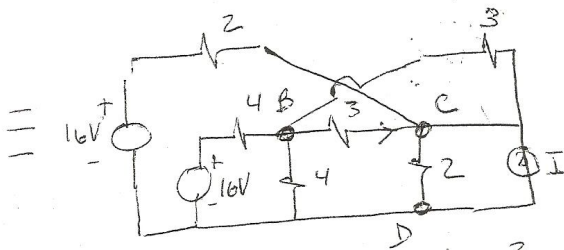
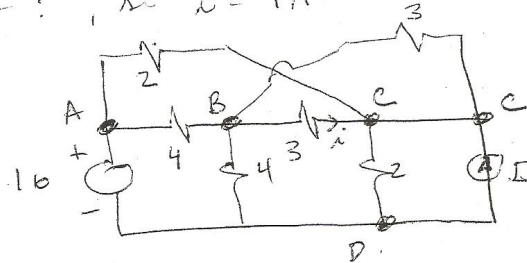


[V, mA, $K\Omega$]

SW-JR-OM

Taller 1

$I = ?$, $i_1 = 4A$



LKC (B)

$$4 = i_1 + 2i_2 \rightarrow i_1 = 4 - 2i_2$$

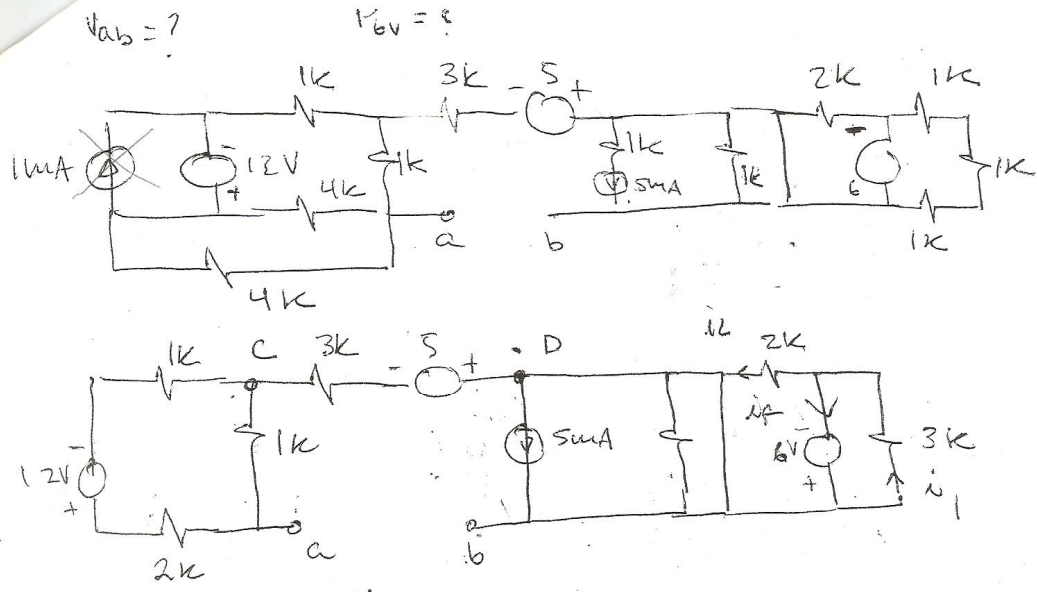
LKC (C)

$$8 + I + 8 = i_2$$

$$16 + I = i_2 \quad \checkmark$$

LKV

$$2i_1 - 3i_2 - i_2 = 0 \rightarrow -8 - 12 - 16 - I = 0 \rightarrow \boxed{I = -36}$$



Divisor de voltaje

$$V_{ac} = \frac{12V \cdot 1k}{4k} = 3V$$

$V_{BD} = 0$ debido al cortocircuito

$$V_{DC} = 5V$$

$$V_{ab} = 0 - 5V + 3V \rightarrow \boxed{V_{ab} = -2V}$$

$$6V = -2k i_2 \rightarrow \boxed{i_2 = -3mA}$$

$$\boxed{i_1 = \frac{6V}{3k} = 2mA}$$

$$i_f = i_1 - i_2 = +5mA$$

$$\boxed{P = 6V(+5mA) = 30mW \text{ esta } \cancel{\text{consumiendo}} \text{ entregando.}}$$