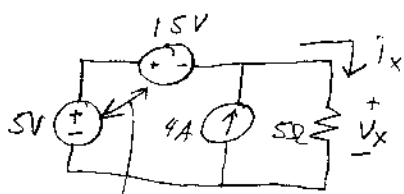
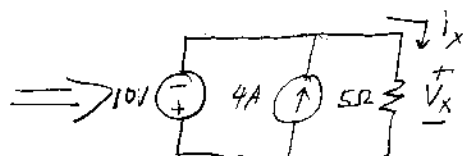


1
2-21)



N.B.: Opposing signs



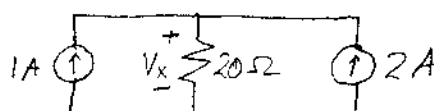
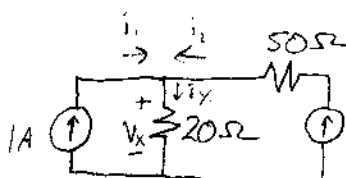
$$\therefore V_x = -10V \quad (\text{by KVL})$$

Ohm's Law: $V = iR$

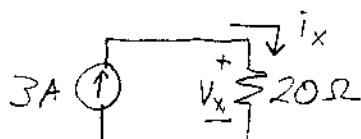
$$i_x = \frac{V_x}{R} = \frac{-10V}{5\Omega}$$

$$\boxed{i_x = -2A}$$

2
2-23)



or: KCL $i_x = i_1 + i_2$
 $= 1A + 2A$
 $= 3A$

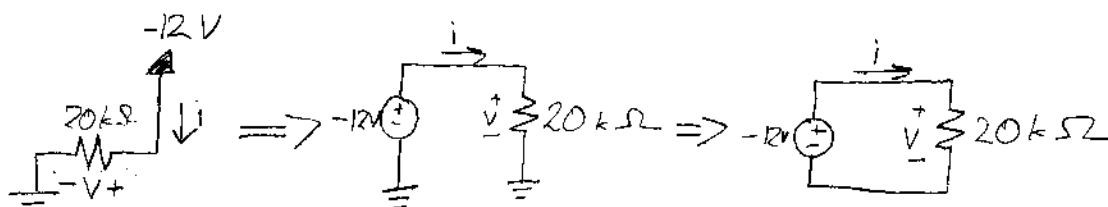


Ohm's Law:

$$V_x = i_x R = 3A \cdot 20\Omega$$

$$\boxed{V_x = 60V}$$

3
2-26)



$$\text{KVL: } \boxed{V = -12V}$$

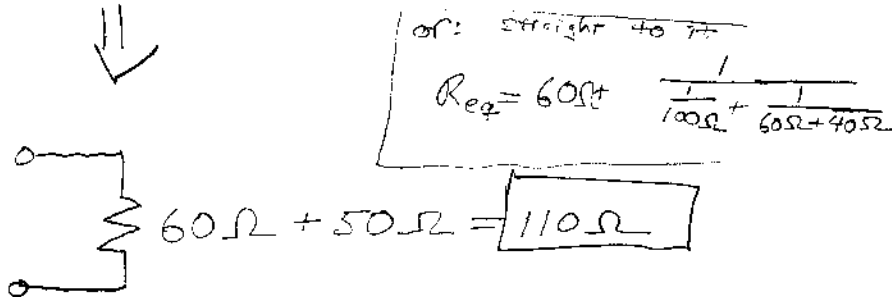
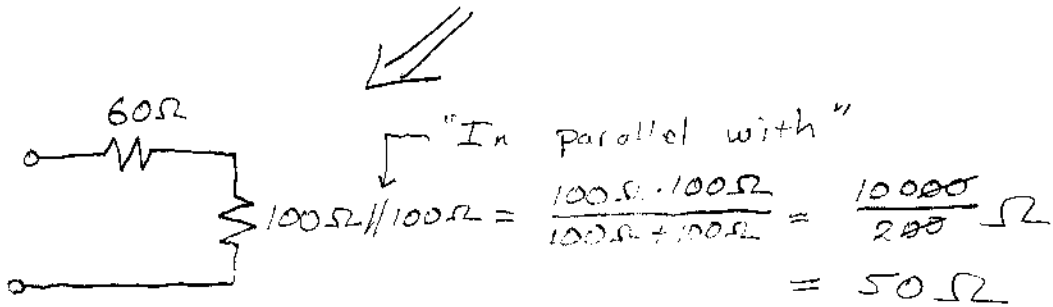
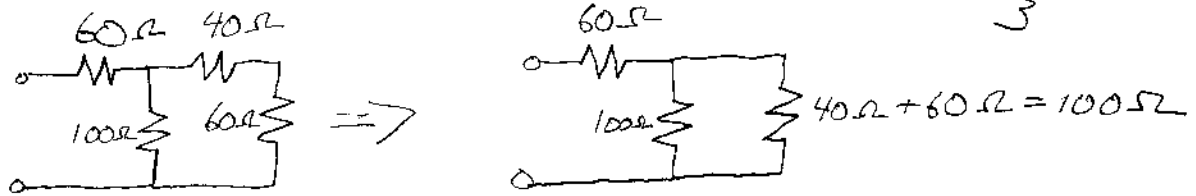
$$\text{Ohm's Law: } i = \frac{V}{R} = \frac{-12V}{20k\Omega}$$

$$\boxed{i = -.6mA}$$

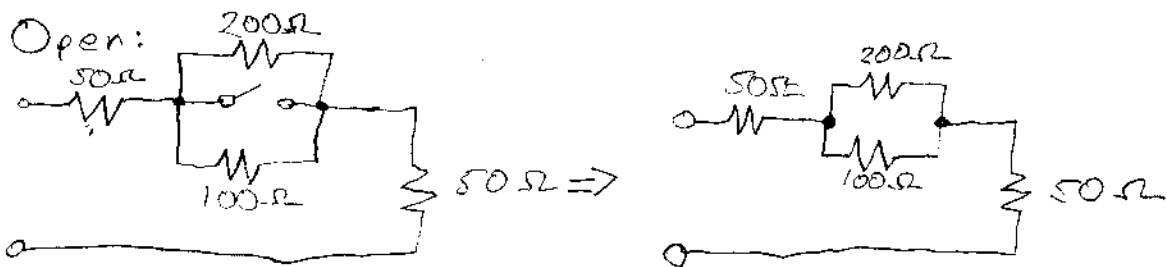
Power: $p = v \cdot i$
 $= (-12V) \cdot (-.6mA)$
 $\boxed{p = 7.2mW}$

2
of
3

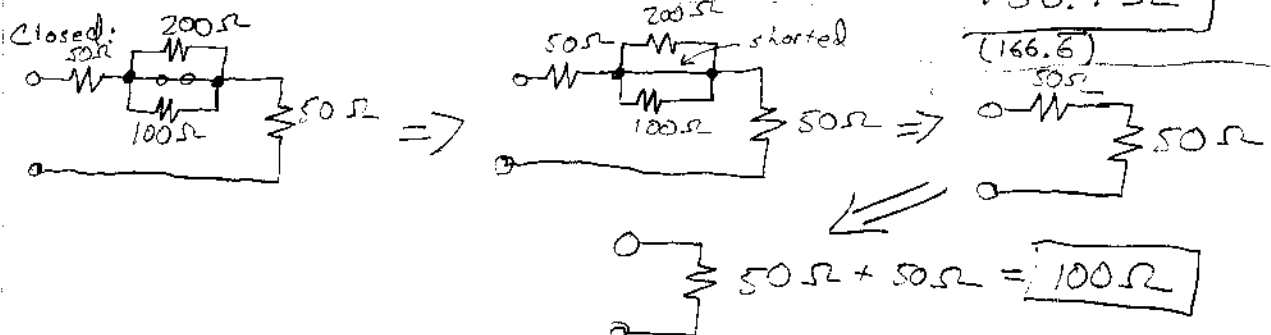
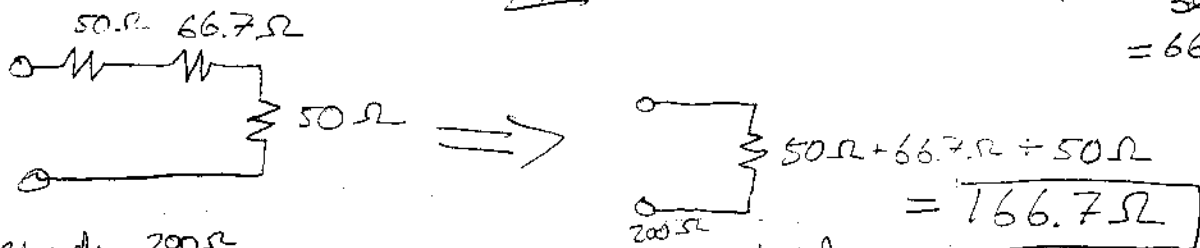
4
2-27



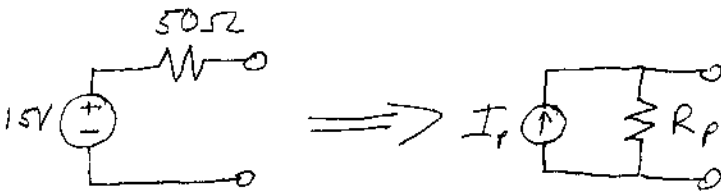
5
2-28



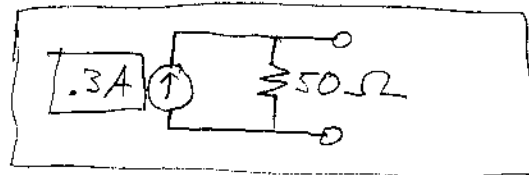
$100\Omega || 200\Omega = \frac{100\Omega \cdot 200\Omega}{100\Omega + 200\Omega} = \frac{20000}{300} \Omega = 66.7\Omega$



6
2-33



$$R_p = 50 \Omega$$
$$I_p = \frac{15V}{50 \Omega}$$
$$= .3A$$



W
T
W