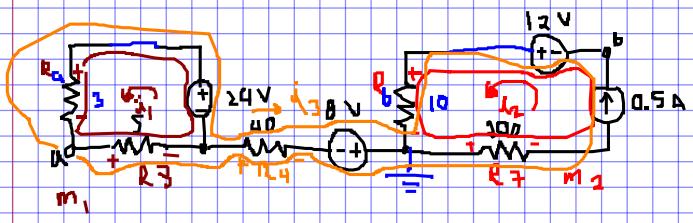
Clase 10 03.11.2022

3) Reducción



4)

Applying KVL at mesh 1:

$-V_{R3} + 24V - V_{R4} = 0$

$-5i_1 - 3i_1 = -24V$

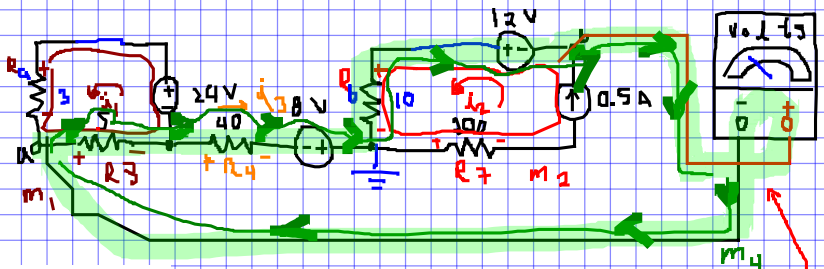
$i_1 = 3A$

Applying KVL at mesh 2

$i_2 = 0.5A$

$i_2 = i_x - i_1 = 0$

$V_{R4} = R_4 i_3 = 0$



Applying KVL at mesh 4

$-V_{R3} - V_{R4} + 8V + V_{R_b} - 12 - V_{ab} = 0$

Polaridad del instrumento

$-V_{R3} - V_{R4} + 8V + V_{R_b} - 12 + V_{ab} = 0$ *Polaridad del instrumento inversa

$V_{ab} = -R_3 i_1 - R_4 i_3 - 4V + R_b i_2$

$= 5(3A) - 40(0A) - 4V + 10(0.5A)$

$V_{ab} = -15V - 4V + 5V = -14V$