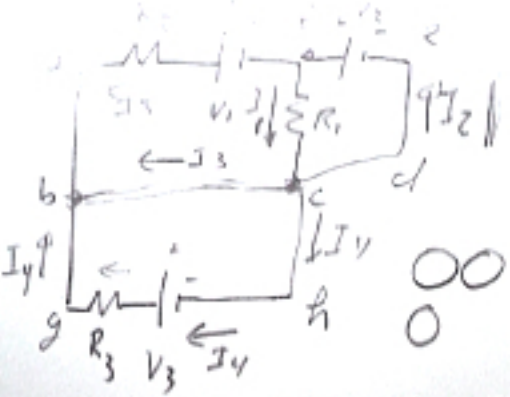


$(abcfa)\ +I_1R_1 + V_1 - I_5R_2 = 0$

$(cdefc)\ +V_2 - I_1R_1 = 0$

$(yhcbg)\ +I_4R_3 - V_3 = 0$

@ c: $I_1 - I_2 - I_3 - I_4 = 0$

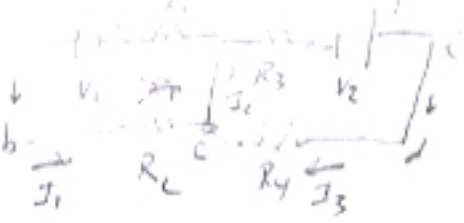
@ b: $I_3 + I_4 + I_5 = 0$

$P = I_1^2 R_1 + I_5^2 R_2 + I_4^2 R_3$

$P = I^2 R = \frac{V^2}{R} = IV$

$I_1 = 20, \quad I_3 = -\frac{125}{6} \quad I_5 = 12.5$

$P = (-I)^2 R = I^2 R$

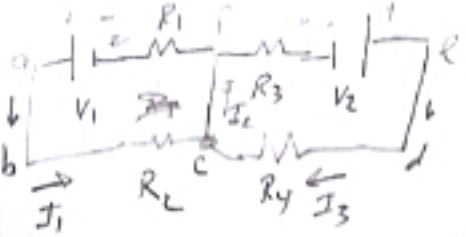


(abcfa): $-I_1 R_2 - I_1 R_1 + V_1 = 0$

(edcfe): $-I_3 R_4 - I_3 R_3 + V_2 = 0$

@ c: $I_1 + I_3 - I_2 = 0$

$I_1 = \frac{V_1}{R_1 + R_2}$ $I_3 = \frac{V_2}{R_3 + R_2}$ I_2



(abcfa): $-I_1 R_2 - I_1 R_1 + V_1 = 0$

(edcfe): $-I_3 R_4 - I_3 R_3 + V_2 = 0$

@c: $I_1 + I_3 - I_2 = 0$

$I_1 = \frac{V_1}{R_1 + R_2}$ $I_3 = \frac{V_2}{R_3 + R_2}$ I_2