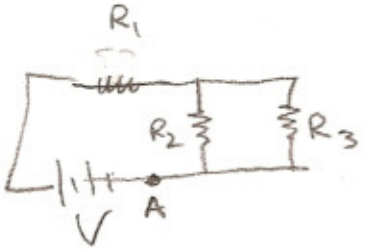
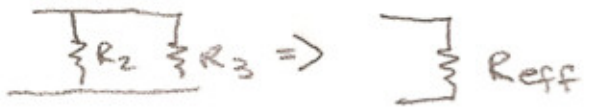
15.



$R_1 = 5.3\,\Omega$
$R_2 = 10\,\Omega$
$R_3 = 20\,\Omega$
$V = 6$ Volts

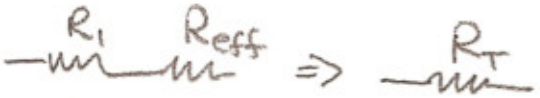
$V = iR$ ($i = ?$ battery?)

① 

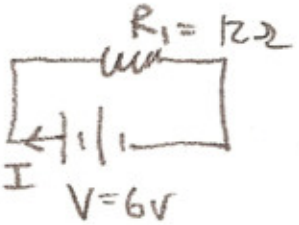
$\frac{1}{R_{eff}} = \frac{1}{10\,\Omega} + \frac{1}{20\,\Omega}$

$\frac{1}{R_{eff}} = \frac{30\,\Omega}{200\,\Omega^2}$

$R_{eff} = \frac{20}{3}\,\Omega$

② 

$R_T = 5.3\,\Omega + \frac{20}{3}\,\Omega = \frac{36}{3}\,\Omega = 12\,\Omega$

③ then 

$\Rightarrow I = \frac{6V}{12\,\Omega} = \underline{0.5A}$.

16. Start point A and go around circle (clockwise):

$+V_{batt} - V_{R_1} - V_{R_2} = 0$ ($V_{R_2} = ?$)

$6V - I_1 R_1 - V_{R_2} = 0$

but $I_1 = 0.5A$ from (15)

so $6V - (\frac{1}{2}A)(5.3\,\Omega) - V_{R_2} = 0$

$\underline{V_{R_2} = 3.35\,V}$.