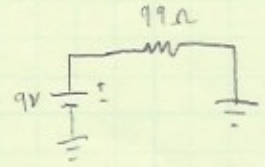
Matthew Begneaud | mjb4932 | MCHE 357 | 1/21/16

1.

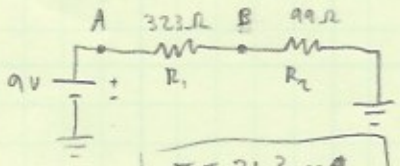


$V = 9\ V$

$I = \frac{V}{R} = \frac{9}{99} = 0.0909\ A = 90.9\ mA$

$V = 9V$
$I = 90.9\ mA$

2.



$I = 21.3\ mA$
$V_A = 9\ V$
$V_B = 2.1201\ V$

$I = \frac{V}{R_{eq}}$. $R_{eq} = 99 + 323 = 422\ \Omega$

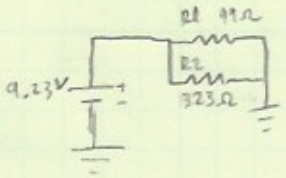
$I = \frac{9}{422} = 0.02133\ A = 21.3\ mA$

$I = 21.3\ mA$

$V_A = 9V$

$V_B = V_A - V_{R_1} = 9 - (21.3)(10^{-3})(323) = 2.1201\ V$

3.



$R_{eq} = \left(\frac{1}{99} + \frac{1}{323}\right)^{-1} = 75.7749\ \Omega$

$I = \frac{V}{R_{eq}} = \frac{9.23}{75.77} = 0.1218\ A = 121.8\ mA$

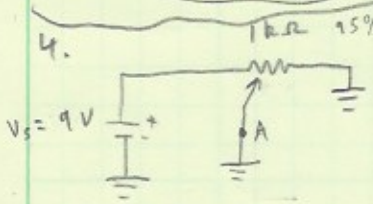
$I = I_1 + I_2$

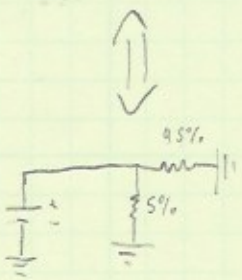
$I_1 = I\ \frac{R_2}{R_1 + R_2} = (121.8)\left(\frac{323}{323+99}\right) = 93.226\ mA$

$I_2 = I - I_1 = 28.57\ mA$

$V = V_A = V_B = 9.23\ V$
$I = 121.8\ mA$
$I_1 = 93.226\ mA$
$I_2 = 28.57\ mA$

4.





$I = \frac{V}{R}$ $R = 0.95(1k\Omega) = 950\ \Omega$

$V_A = 0.95\ V_s$

$V_A = 0.95(9) = 8.55\ V$

$V_A = 8.55\ V$

$I_A = \frac{V}{R(0.05)} = \frac{9}{50} = 0.180\ A = 180\ mA$

$V_A = 8.55V$
$I_A = 180\ mA$