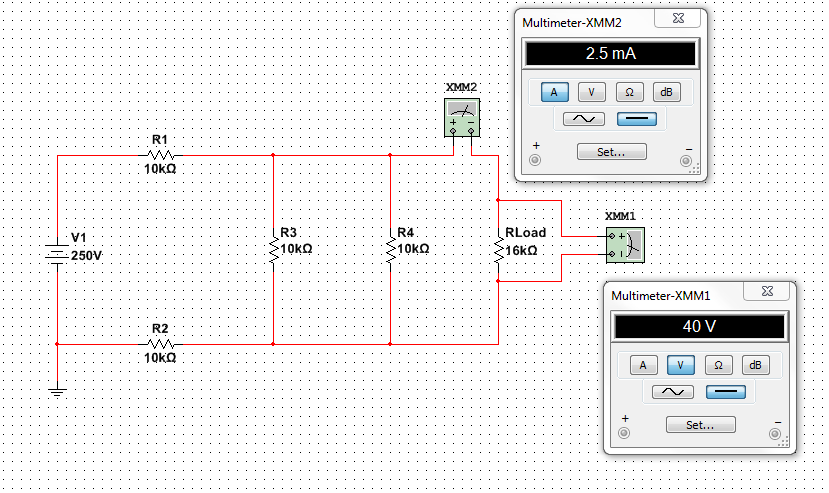
1.



2.

R\_T = R1 + R2 + (1/R3 + 1/R4 + 1/R\_Load)^-1

R\_T = 23.81kohm

I\_T = V\_1/R\_T

I\_T = 10.5mA

V\_R1 = I\_T\*R1

V\_R1 = 105V

V\_R2 = I\_T\*R2

V\_R2 = 105V

V\_TH = (V\_T - V\_R1) - V\_R2

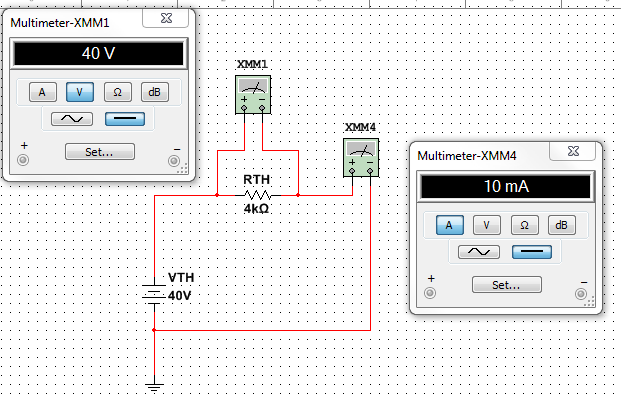
V\_TH = 40V

R\_TH = (1/(R1+R2) + 1/R3 + 1/R4)^-1

R\_TH = 4kOhm

I\_TH = V\_TH/R\_TH

I\_TH = 10mA



3.

R\_T = (1/R\_TH + 1/R\_Load)^-1

R\_T = 3.2kOhm

I\_T = V\_TH/R\_T

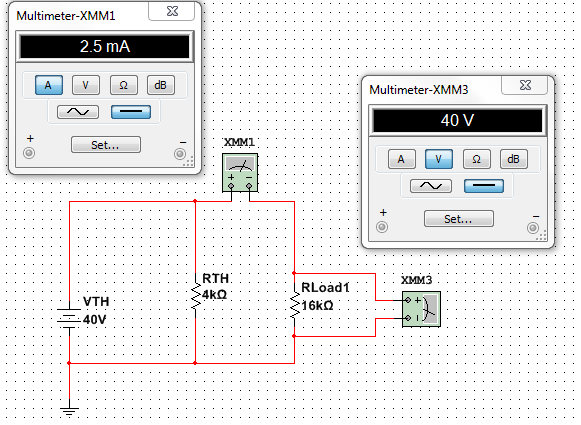
I\_T = 12.5mA

I\_RLoad = I\_T - I\_TH

I\_RLoad = 2.5mA

V\_RLoad = I\_T \* R\_Load

V\_RLoad = 40V



4.

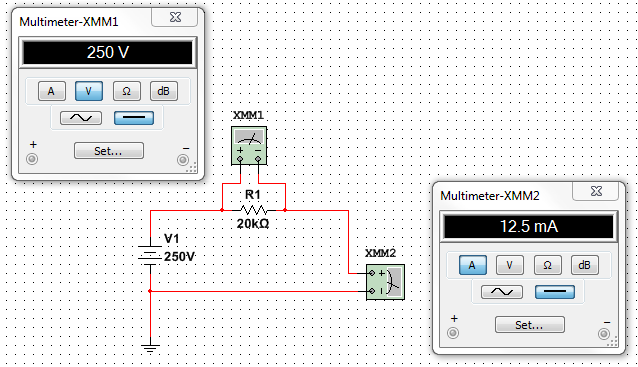
Find I\_N

Short from point A to B

R3 and R4 disappears

R\_T = R1 + R2 = 20kOhm

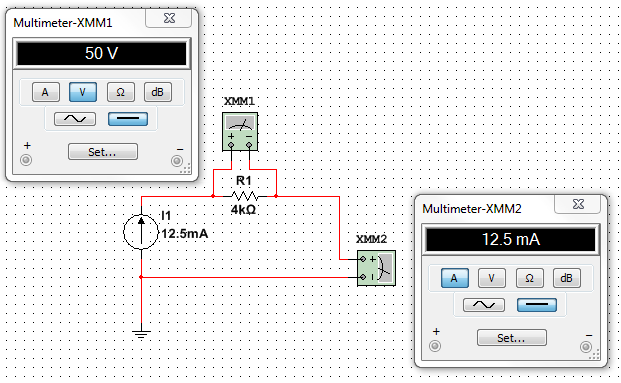
I\_N = V1/R\_T = 12.5mA



Find R\_N

Short V1

R\_N = R\_TH = 4kOhm (see answer from problem #2)



5.

