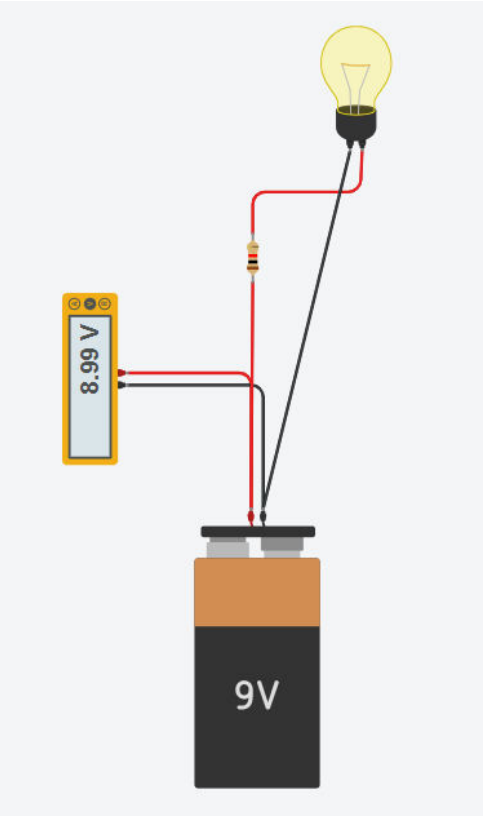
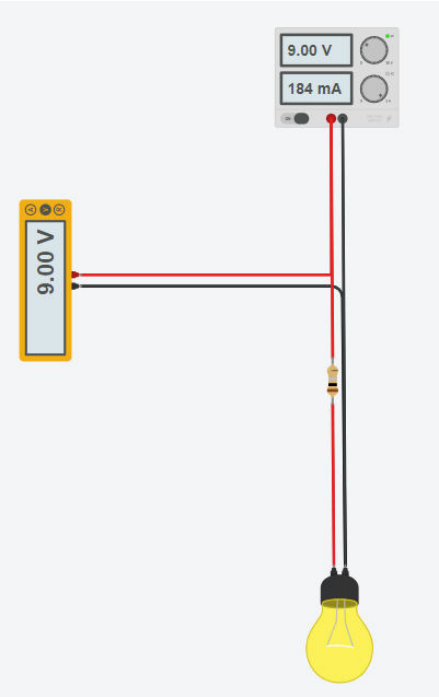
Margaritescu Vlad, Grupa 322 AB

1.

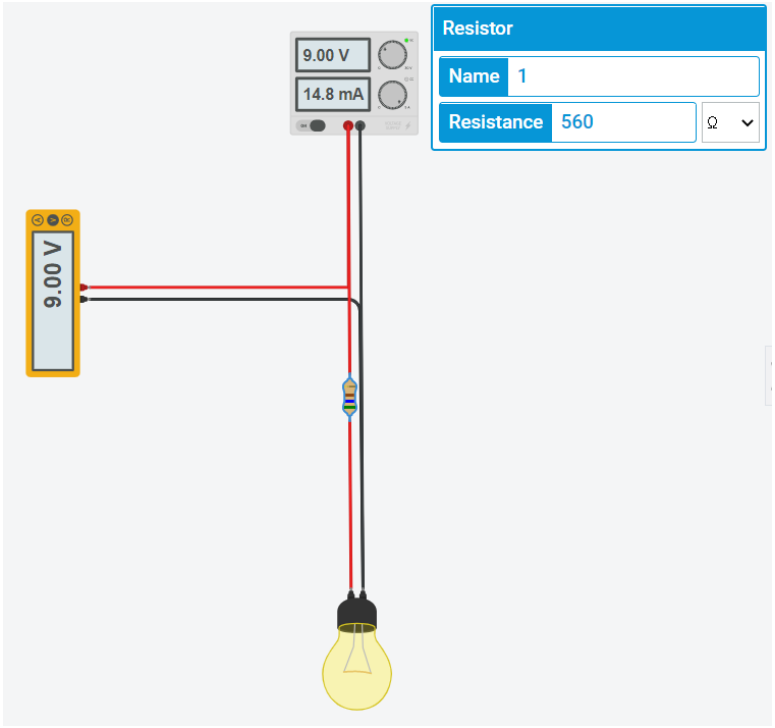


a) 8.99 V
b) Valoarea masurata este mai mica decat cea nominala, deoarece bateria are rezistenta interna
c)

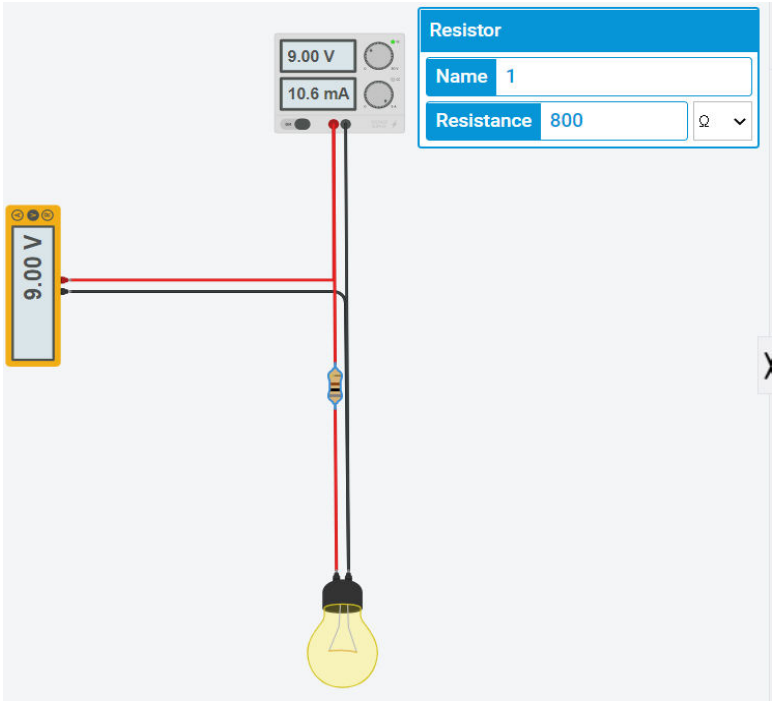


Se observa ca tensiunea este identica

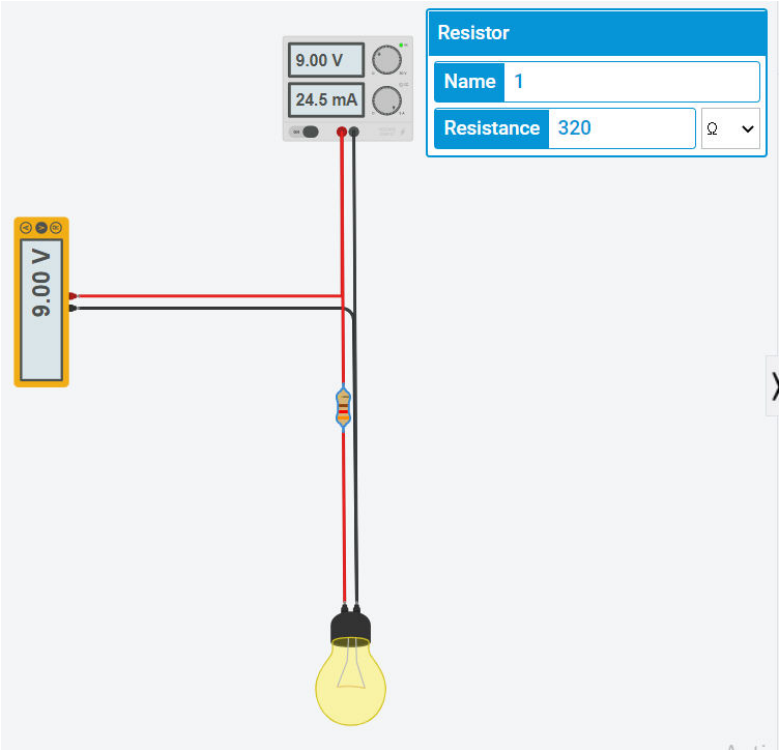
d)



Initial: R=560 ohmi si I=14.8 mA

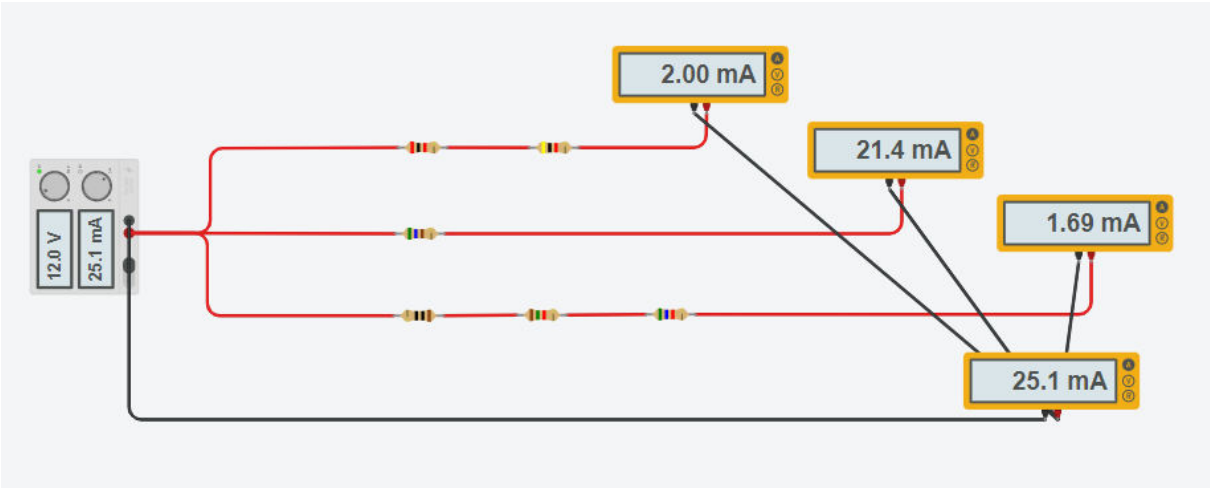


R=800 ohmi si I=10.6 mA -> Daca R creste, I scade



R=320 ohmi si I=24.5 mA -> Daca R scade, I creste

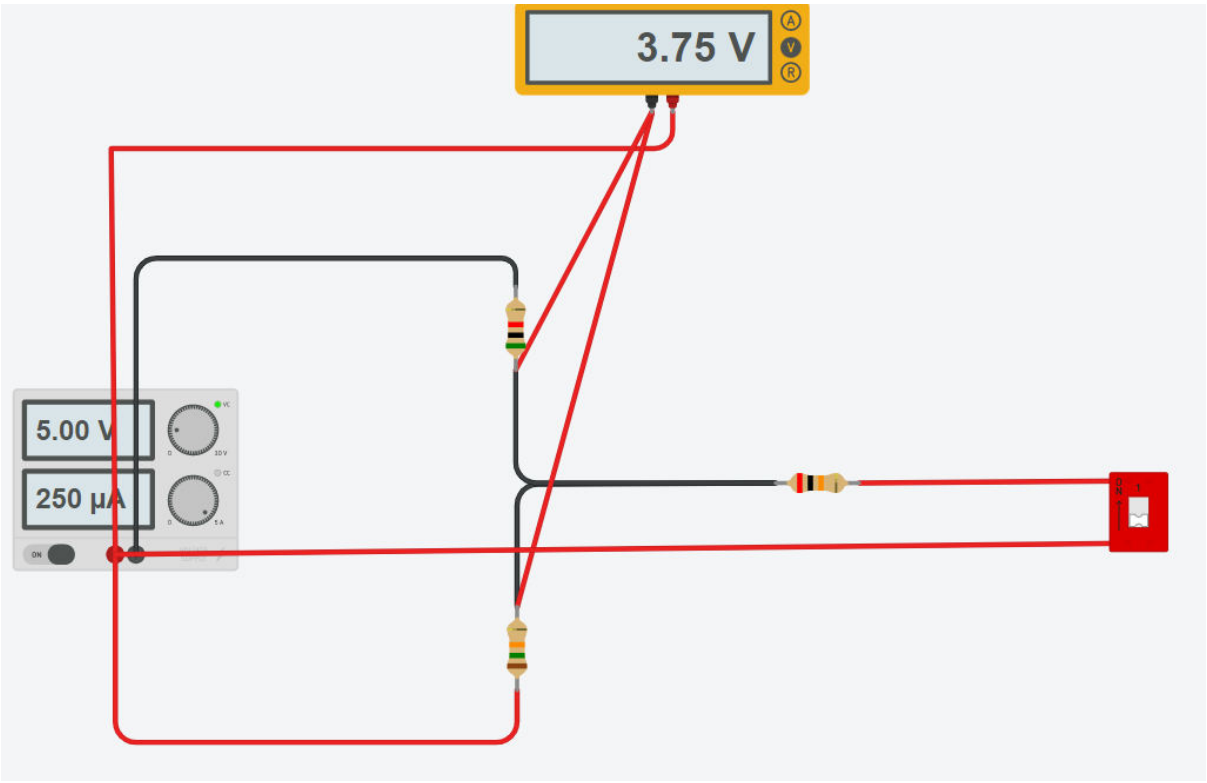
2.



a) I1 = 2.00 mA
I2 = 21.4 mA
I3 = 1.69 mA

b) I = I1 + I2 + I3 = 2 + 21.4 + 1.69 = 25.09 mA, aproximativ 25.1 mA

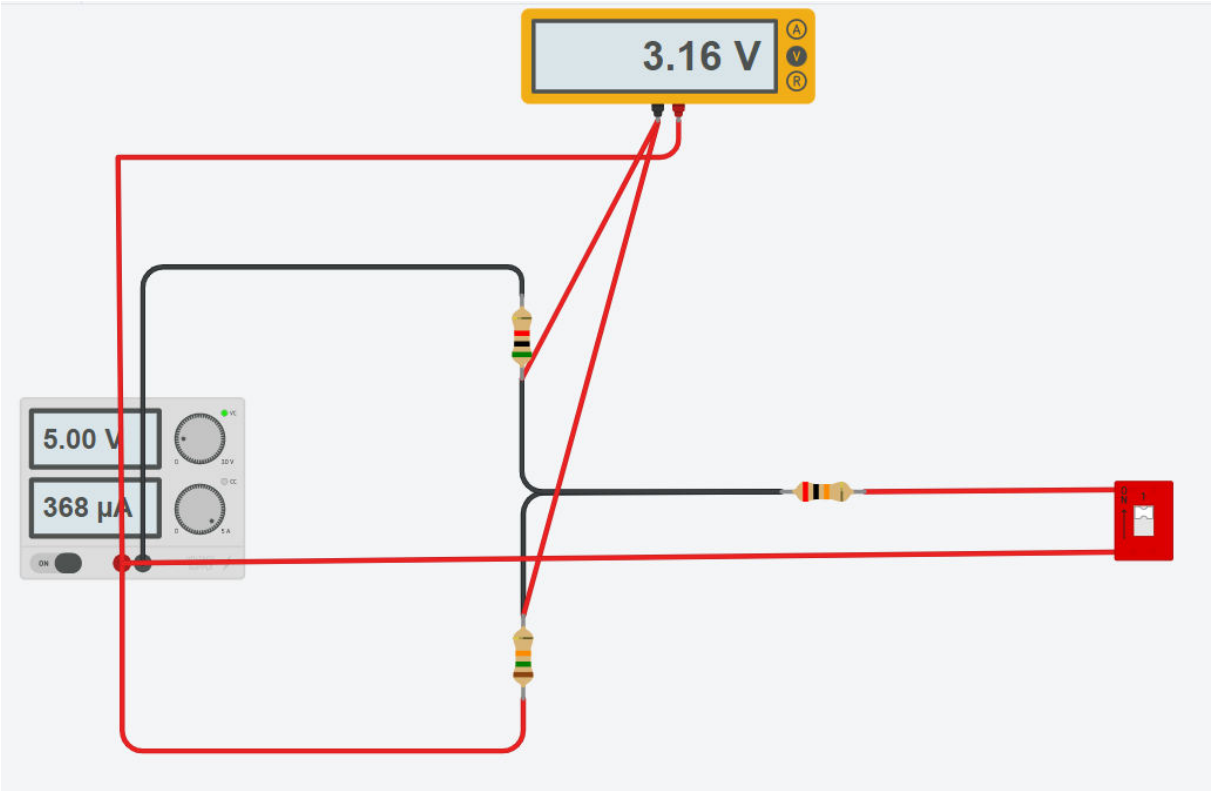
3. a)



V = 3.75 V

Formula standard a divizorului rezistiv:

V = E * (R2/(R1+R2)) = 5 * (15/20) = 5 * 0.75 = 3.75 V

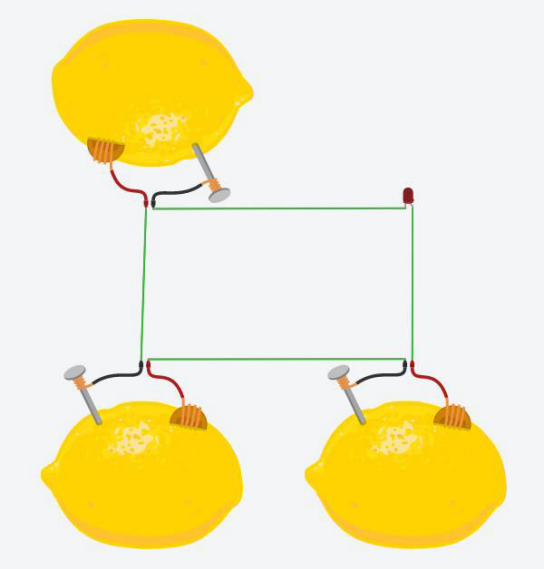


Acum caderea de tensiune este 3.16 V

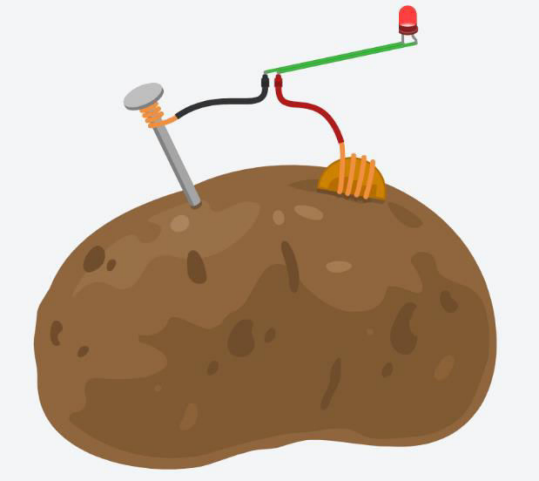
b)

$R_{Th} = E_{Th} / I_{sc} = 4Kohmi$
$E_{Th} = E * R2/(R1+R2) = 5 * 15/20 = 5 * 0.75 = 3.75 V$
$I_{sc} = E / R1 = 10 mA$
$U = E_{Th} * Rs/ (Rs + R_{Th}) = 3.75 * 20 / (20 + 3.75) = 3.157 V = 3.16 V$

4.



Este nevoie de 3 lamai legate in serie



Este nevoie de un cartof