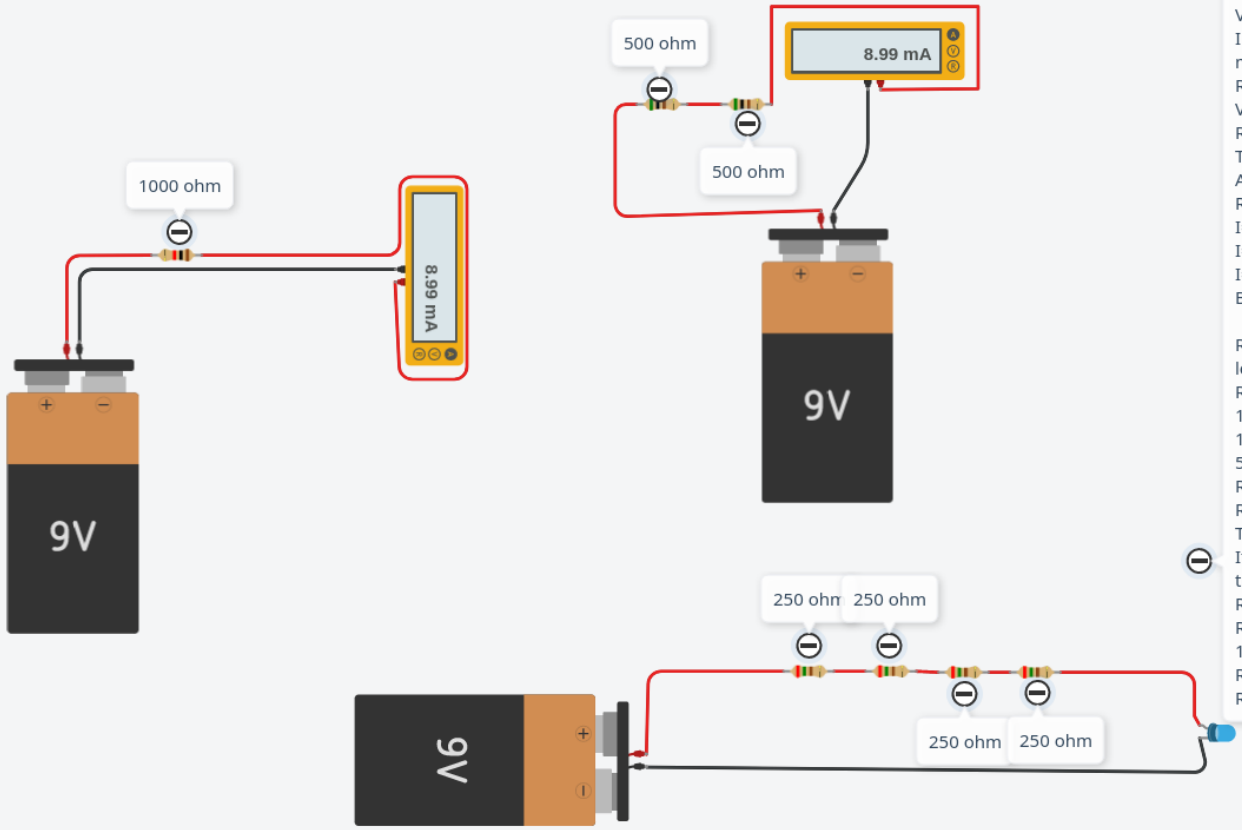



Ques 1: Build a series circuit with a 9V battery and a 1000 ohm resistor (9mA current flow)
Solution:-
V stands for Voltage the standard unit of voltage is V(volt)
I stands for Current and the standard unit of current is A(Ampere) or mA(milliampere)
R is Resistance and the standard unit of R
V= 9V(given)
R= 1000 ohm (given)
The current flow in the circuit is 9mA.
According to ohms law:
R = V/I
I=V/R
I=9/1000
I= 9mA (1mA = 0.001A)
Build a series circuit with a 9V and 1000 ohm resistance

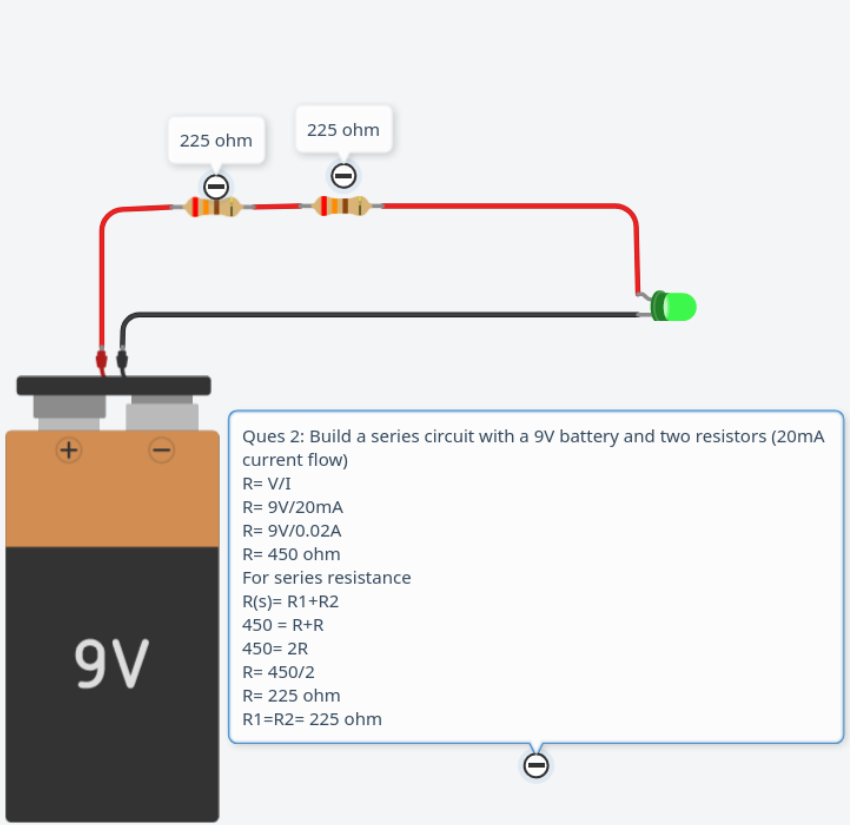
R(s)= R1+R2
let the two resistance be equal to R
R(S)=R+R
1000=2R
1000/2=R
500=R
R= 500 ohm
R1=R2=R= 500 ohm
Then, the resistance will be R1= 500ohm and R2 = 500 ohm
If, I connect four Resistance in series then one resistance will be equal to 250 ohm
R(s)= R1+R2+R3+R4
R(s)= 4R
1000=4R
R= 250 ohm
R=R1=R2=R3=R4= 250ohm

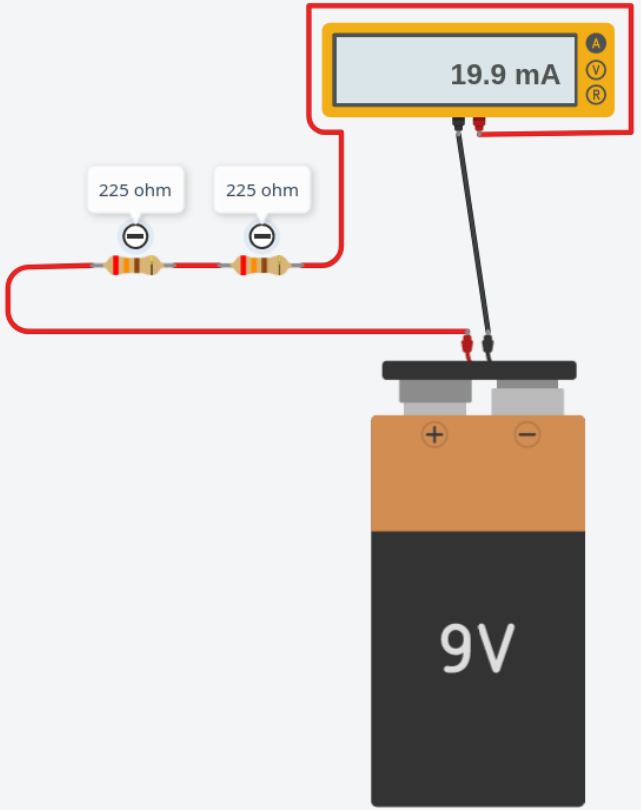
Powerful Luulia-Amur

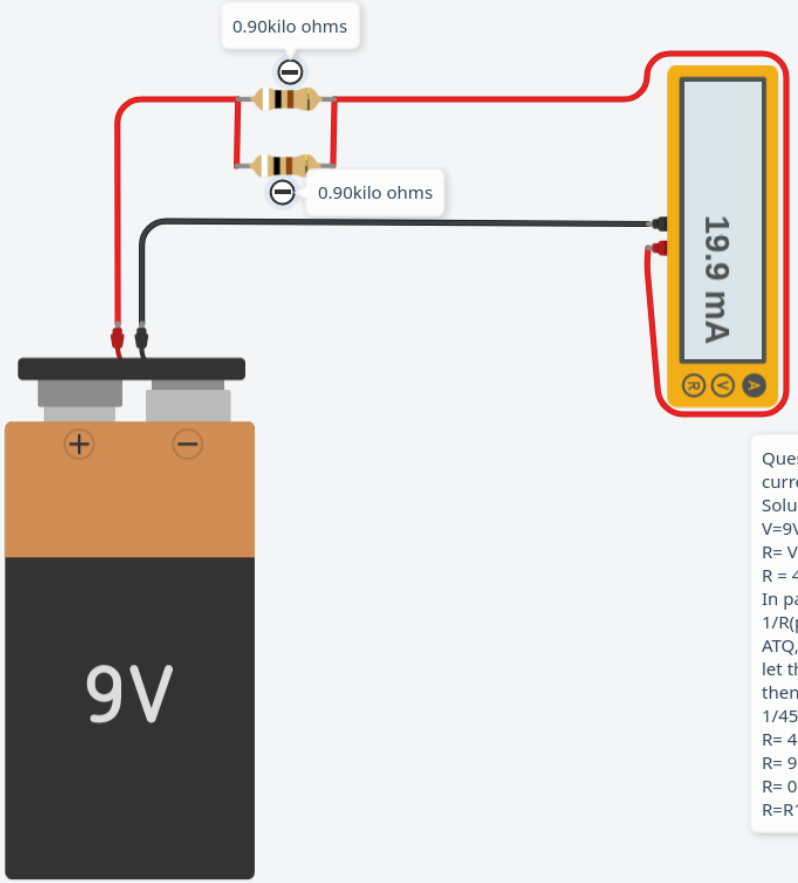
All changes saved

Simulator time: 00:00:09

Code | Stop Simulation | Send To






Ques 3: build a parallel circuit with a 9V battery and 2 resistors (20mA current flow).
Solution:
V=9V and I = 20mA or 0.02A
R= V/I = 9V/0.02A
R = 450 ohm
In parallel circuit, the resistance is calculated as
1/R(p)= (1/R1)+(1/R2)+..... so on
ATQ, we have to build a parallel circuit and by using two resistance only let the two resistance are R
then, 1/R(p)= 1/R+1/R
1/450= 2/R
R= 450*2
R= 900 ohm
R= 0.90kilo ohms
R=R1=R2= 0.90kilo ohms