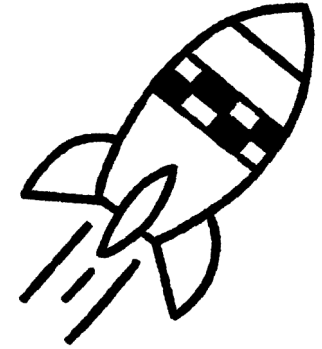


Qiyaasida hadda (current) ee wareegga barbar socda (parallel circuit)



Sayniska

Cutub: Iska caabbinta (Resistance) iyo wareegyada barbar socda (parallel circuits)

Natiijo

Waxaan qiyaasi karaa sida loo qiyaaso hadda (current) ee laamaha kasta ee wareegga barbar socda (parallel circuit).

Erayada muhiimka ah

ammeter

qalab qiyaasa hadda (current) ku qulqulaya wareegga

amps

halbeegga lagu qiyaaso hadda (current) (oo soo gaabiyay amperes), oo uu matalo calaamadda A

laan (branch)

loop gooni ah oo ka mid ah wareegga barbar socda (parallel circuit)

wareeg barbar socda (parallel circuit)

wareeg leh in ka badan hal loop oo dhammaystiran, oo ka bilaabma dhammaadka batteriga ilaa dhammaadka kale

Qaabka casharka

Qiyaasida hadda (current) ee wareegga barbar socda (parallel circuit)



Qiyaasida hadda (current) ee wareegga barbar socda (parallel circuit)



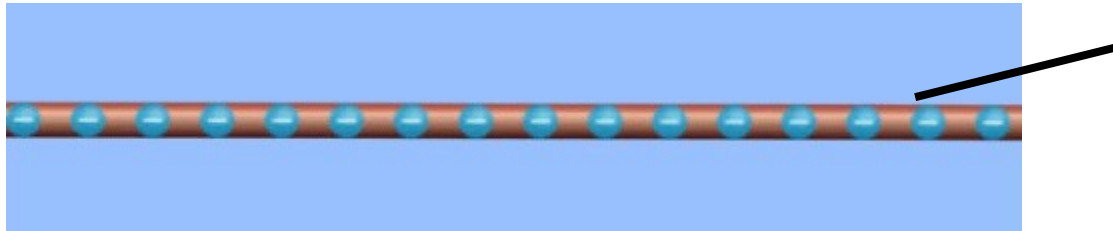
Qaanuunka hadda (current) ee wareegyada barbar socda (parallel circuits)

Qiyaasida hadda (current) ee wareegga barbar socda (parallel circuit)

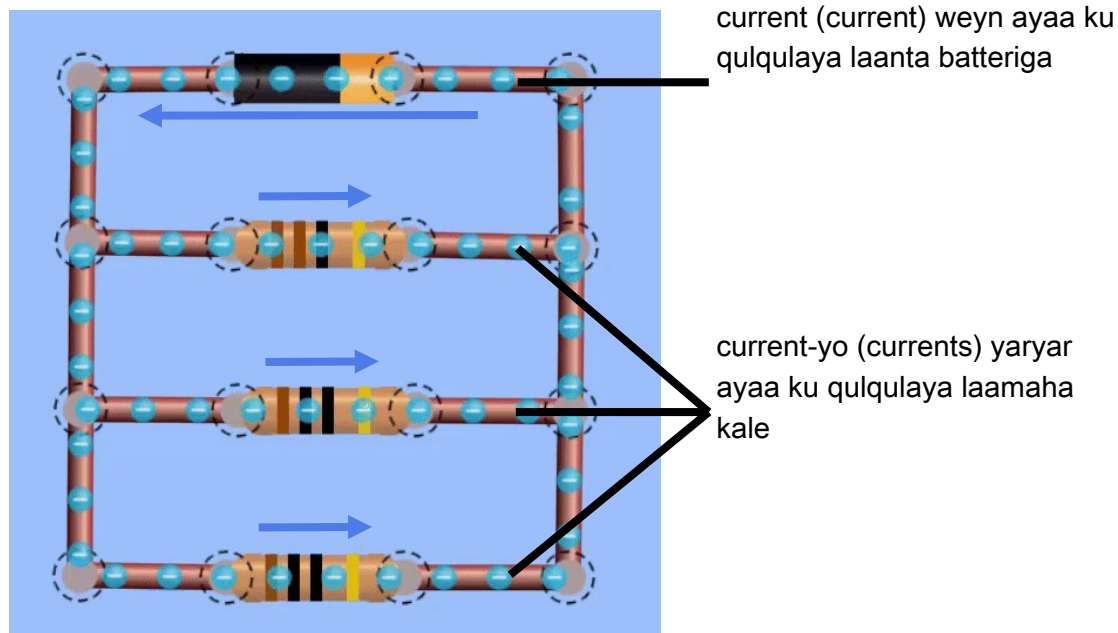
Ammeter wuxuu qiyaasaa hadda (current) ku qulqulaya siligga, oo lagu qiyaaso amps (A).



Hadda (current) ee siligga waa xadiga korantada (electric charge) ee dhaqaaqa laanta siligga ilbiriqsi kasta.



Animation-ka hoose wuxuu muujinayaa sida hadda (current) u qulqulo wareegga barbar socda (parallel circuit).



Run mise been?

Current-ka (current) qaybaha kala duwan ee wareegga barbar-socodka (parallel circuit) waa isku mid.

T Run

F Been



Sabab u sheeg jawaabtaada

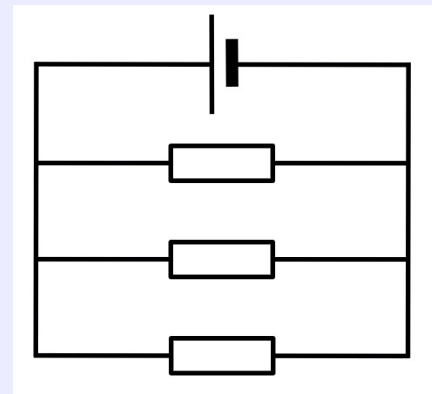
a

Isgoys (junction) dhexdiisa, current-ku (current) wuu kala qaybsamaa oo wuu yaraadaa.



b

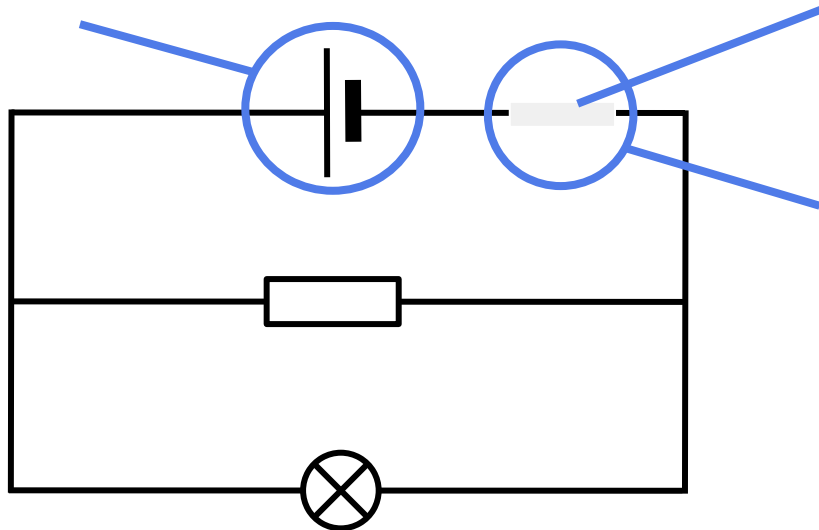
Laan (branch) kastaa waxay leedahay iska-caabin (resistance) isku mid ah, sidaas darteedna current (current) isku mid ah.



Qiyaasta current-ka (current) ee wareegga barbar-socodka (parallel circuit)

Current-ka (current) laan (branch) kasta si kala duwan ayaa loo qiyaasaa.

Si loo qiyaaso current-ka (current) unugga (cell) dhex mara ...



ama halkan

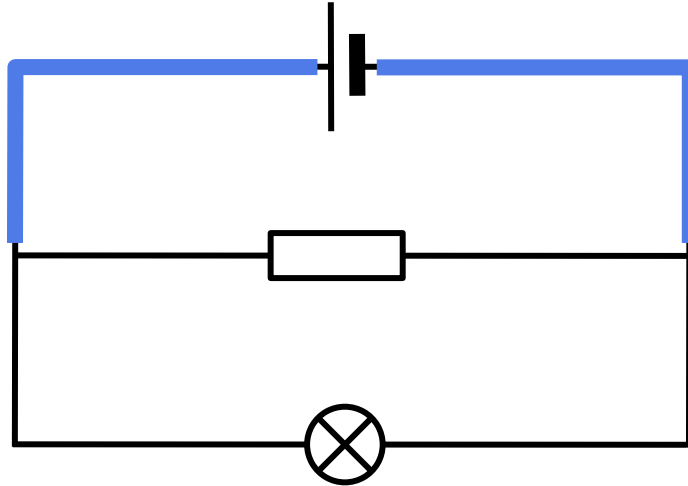
ama halkan

ama halkan

Waxaa la dhigi karaa halkan ...

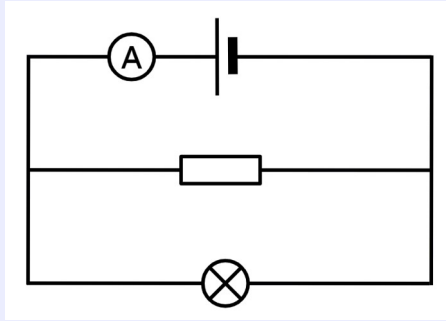
Qiyaasta current-ka (current) ee wareegga barbar-socodka (parallel circuit)

Ammeter-ka (ammeter) waxaa lagu xiri karaa meel kasta oo laanta sare (top branch) ah, isgoysyada (junctions) ka hor.

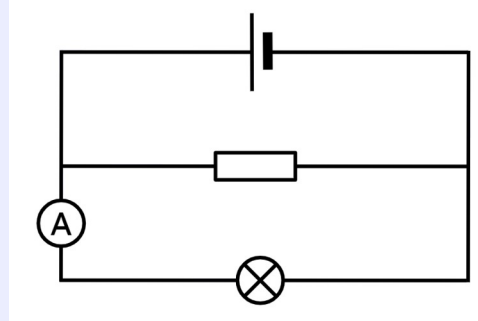


Qiyaasta current-ka (current) ee wareegga barbar-socodka (parallel circuit)

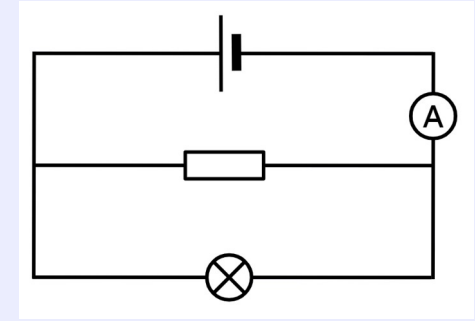
Wareegyada (circuits) soo socda kee baa muujinaya ammeter (ammeter) oo ku jira booska saxda ah si loo qiyaaso current-ka (current) unugga (cell) dhex mara?



a ✓



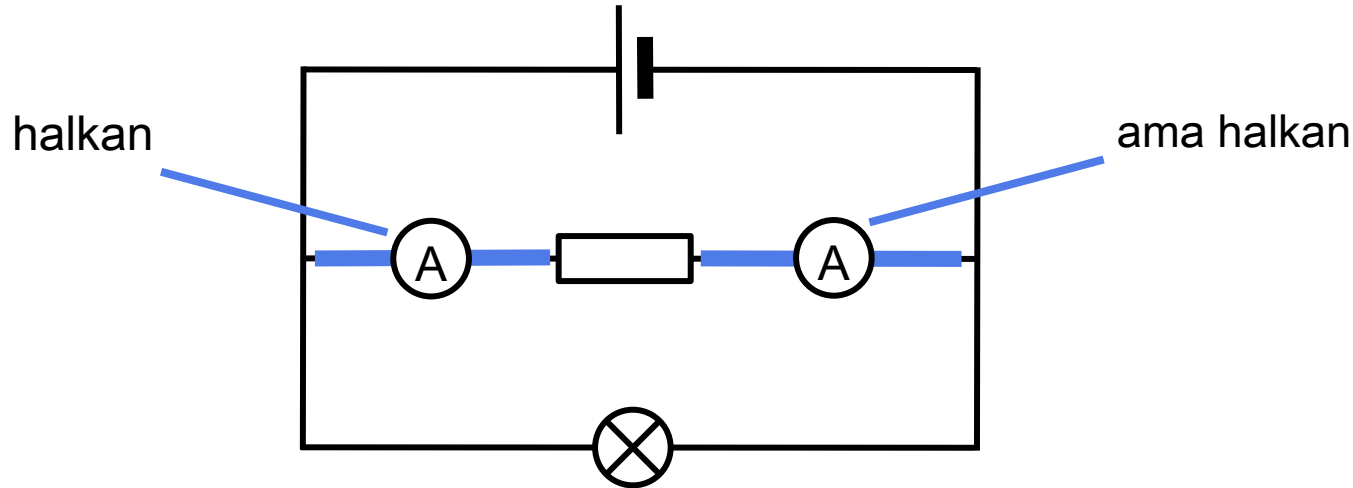
b



c ✓

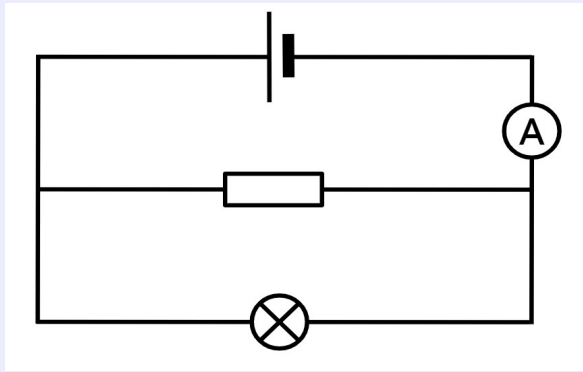
Qiyaasta current-ka (current) ee wareegga barbar-socodka (parallel circuit)

Si loo helo hadda (current) ee resistor-ka, ammeter-ka waa in lagu xiraa laanta dhexe.

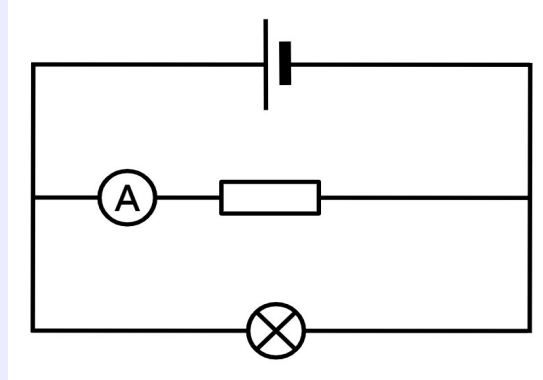


Cabbirka hadda (current) ee wareeg isbarbar (parallel circuit)

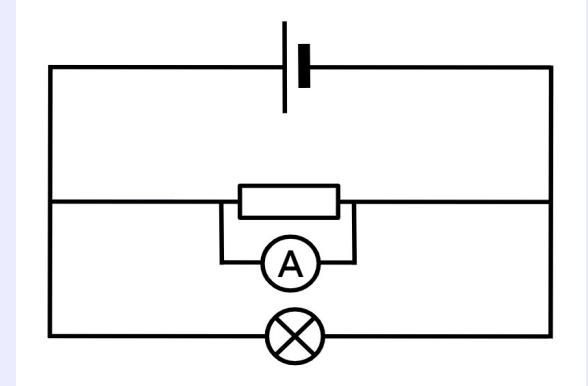
Kee ka mid ah wareegyada (circuits) ayaa muujinaya ammeter meel sax ah si loo cabbiro hadda (current) ee resistor-ka?



a



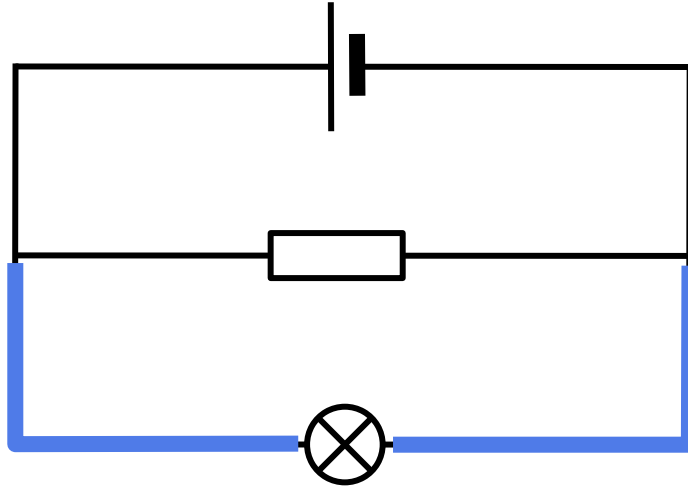
b ✓



c

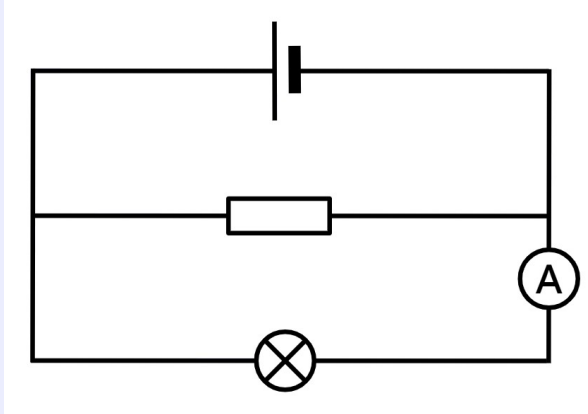
Cabbirka hadda (current) ee wareeg isbarbar (parallel circuit)

Si loo helo hadda (current) ee laambadda, ammeter-ka waa in lagu xiraa laanta hoose.

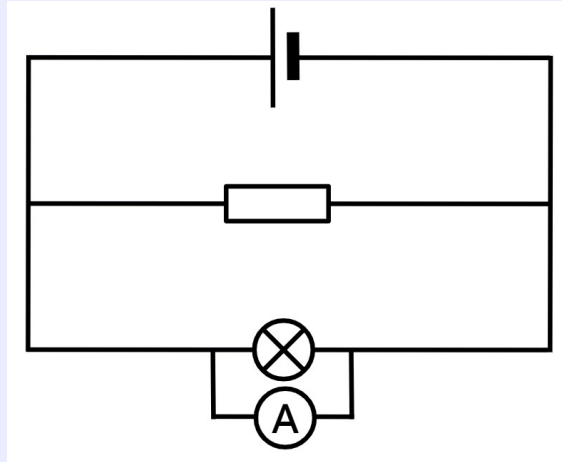


Cabbirka hadda (current) ee wareeg isbarbar (parallel circuit)

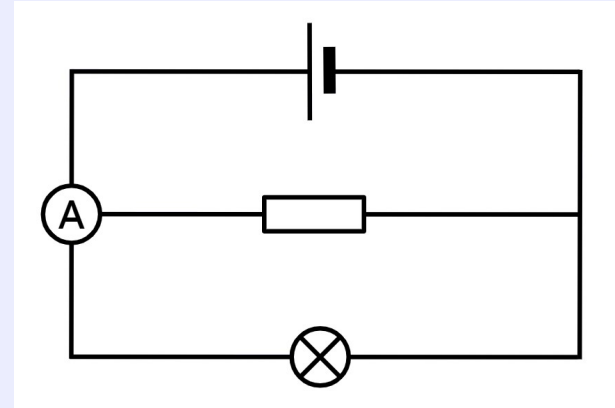
Kee ka mid ah wareegyada (circuits) ayaa muujinaya ammeter meel sax ah si loo cabbiro hadda (current) ee laambadda?



a ✓

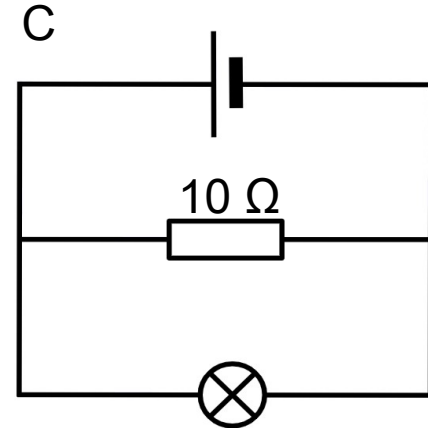
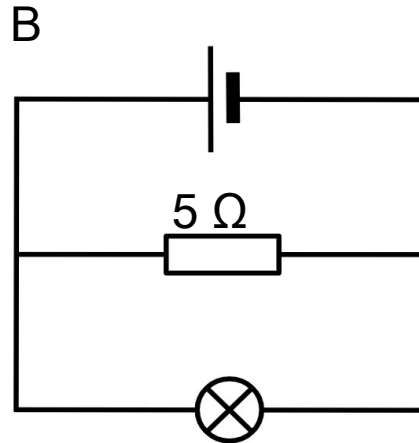
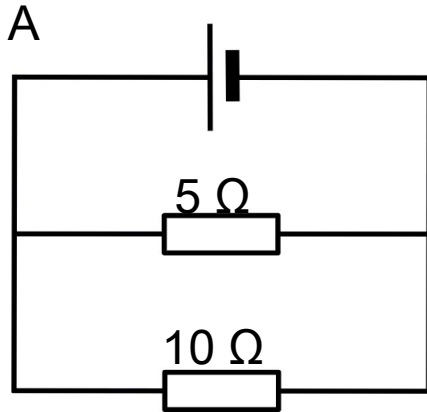


b



c

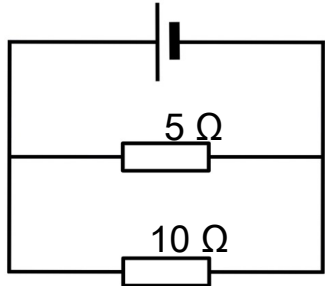
- 1) Samee wareeg A oo cabbir hadda (current) ee unugga (cell).
- 2) Cabbir hadda (current) ee laan kasta.
- 3) Qor dhammaan cabbiraadahaaga.
- 4) Ku celi tillaabooyinka 1 ilaa 3 wareegyada B iyo C.



Hawsha A Cabbirka hadda (current) ee wareeg isbarbar (parallel circuit)

Natijjooyinka tusaale ee hadda (current) ee laamaha:

A

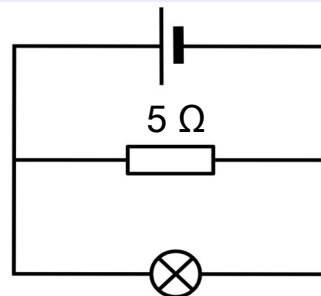


unugga (cell): 0.45 A

5 Ω resistor: 0.30 A

10 Ω resistor: 0.15 A

B

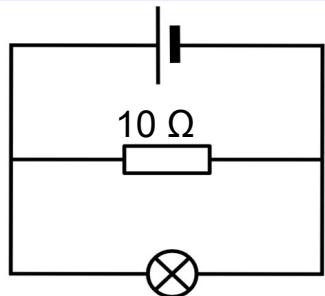


unugga (cell): 0.50 A

5 Ω resistor: 0.30 A

lamb (Lamp): 0.20 A

C



unug (Cell): 0.35 A

10 Ω resistor (Resistor): 0.15 A

lamb (Lamp): 0.20 A

Qaabka casharka

Qiyaasta haddiyaha (Current) ee wareegga barbar-socda (Parallel circuit)

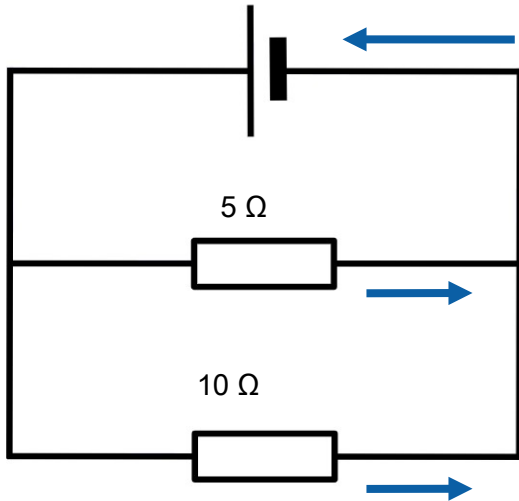


Qiyaasta haddiyaha (Current) ee wareegga barbar-socda (Parallel circuit)



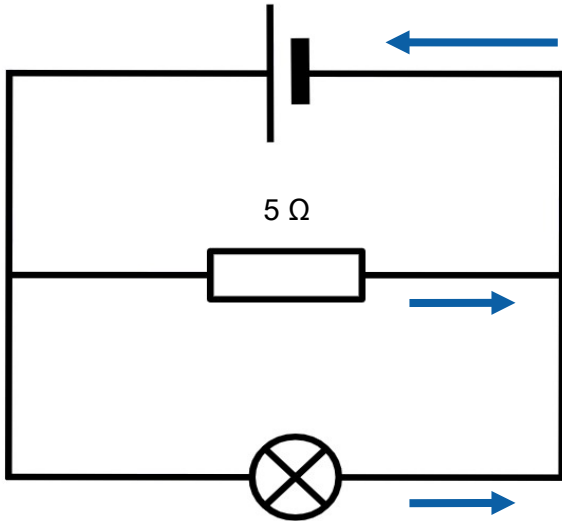
Qaanuunka haddiyaha (Current) ee wareegyada barbar-socda (Parallel circuits)

Wareegga A, haddiyayaasha (Currents) ee laamaha (Branches) waxay ahaayeen:



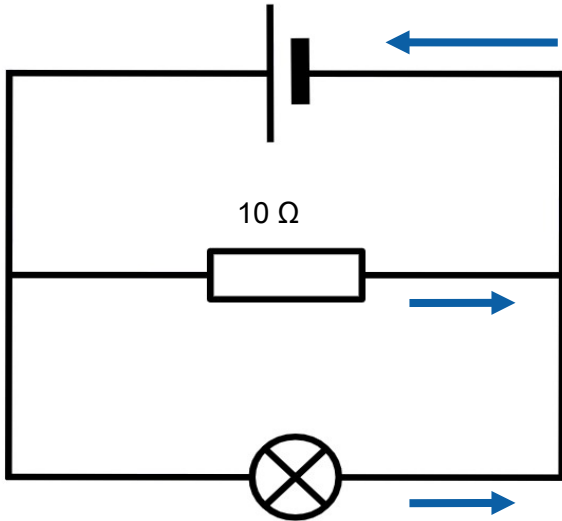
Haddiyaha (Current) ee laanta (Branch) unugga (Cell) wuxuu la mid yahay wadarta haddiyaha (Current) ee laamaha (Branches) kale.

Wareegga B, haddiyayaasha (Currents) ee laamaha (Branches) waxay ahaayeen:



Haddiyaha (Current) ee laanta (Branch) unugga (Cell) wuxuu la mid yahay wadarta haddiyaha (Current) ee laamaha (Branches) kale mar kale.

Wareegga C, haddiyayaasha (Currents) ee laamaha (Branches) waxay ahaayeen:



Mar kale, haddiyaha (Current) ee laanta (Branch) unugga (Cell) wuxuu la mid yahay wadarta haddiyaha (Current) ee laamaha (Branches) kale.

Qaanuunka haddiyaha (Current) ee wareegyada barbar-socda (Parallel circuits)

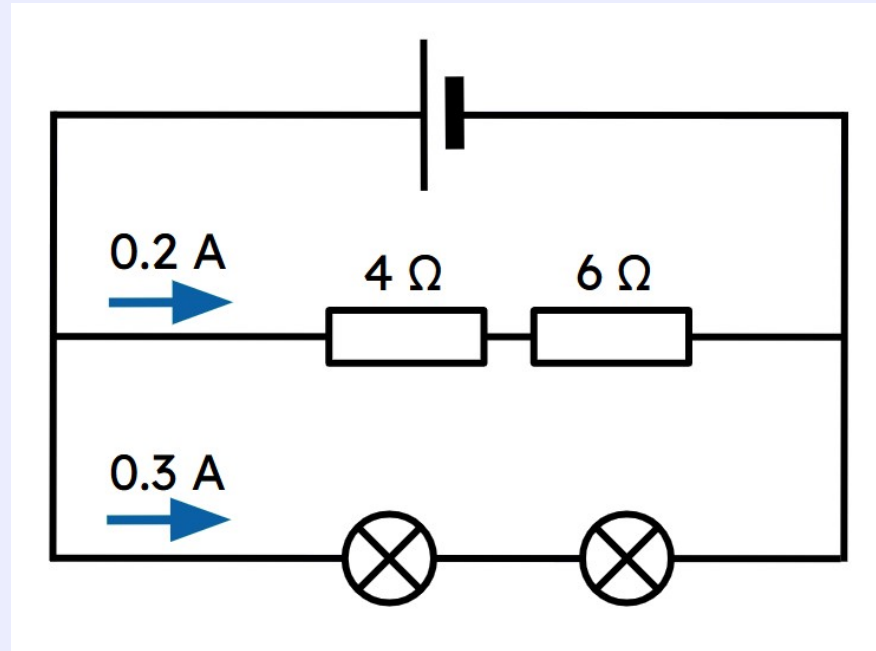
Waa maxay haddiyaha (Current) uu maro unugga (Cell) ee wareegga (Circuit) la muujiyey?

a 0.2 A

b 0.3 A

c 0.4 A

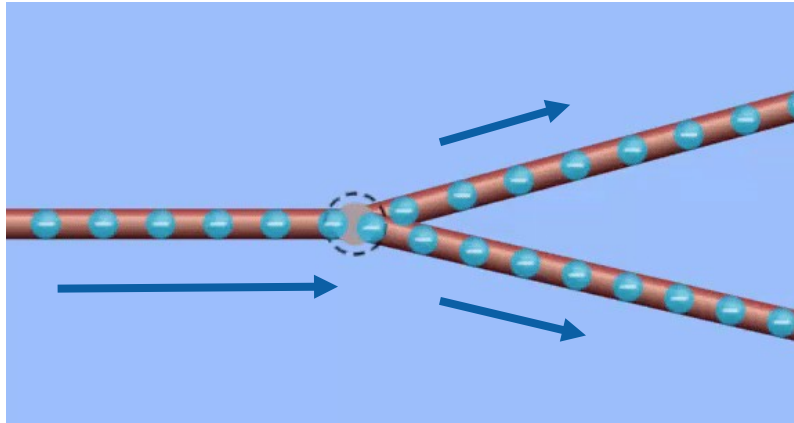
d 0.5 A



$$0.2 + 0.3 = 0.5 \text{ A}$$

Qaanuunka hadda (current) ee wareegyada barbar socda (parallel circuits)

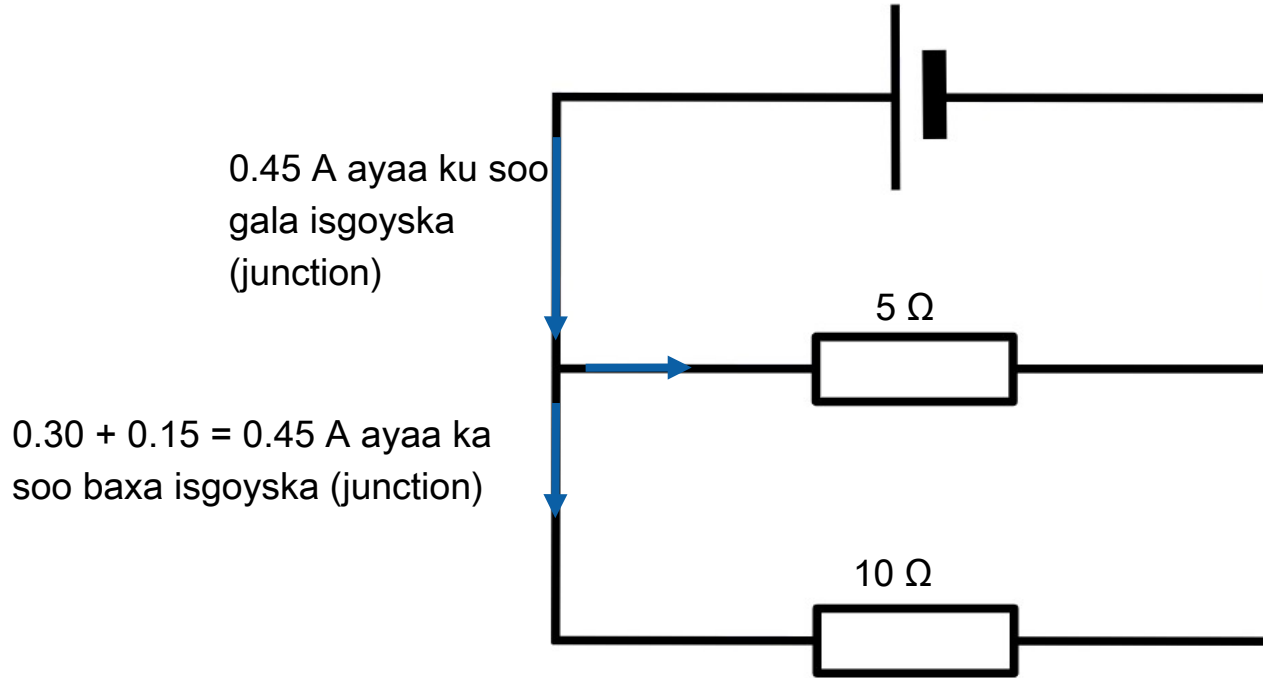
Qaanuunka haddiyaha (Current) ee isgoysyada (Junctions) waa in wadarta haddiyaha (Current) ee ku shubanaya isgoyska (Junction) wuxuu la mid yahay wadarta hadda (current) ka soo baxaya isgoyska (junction).



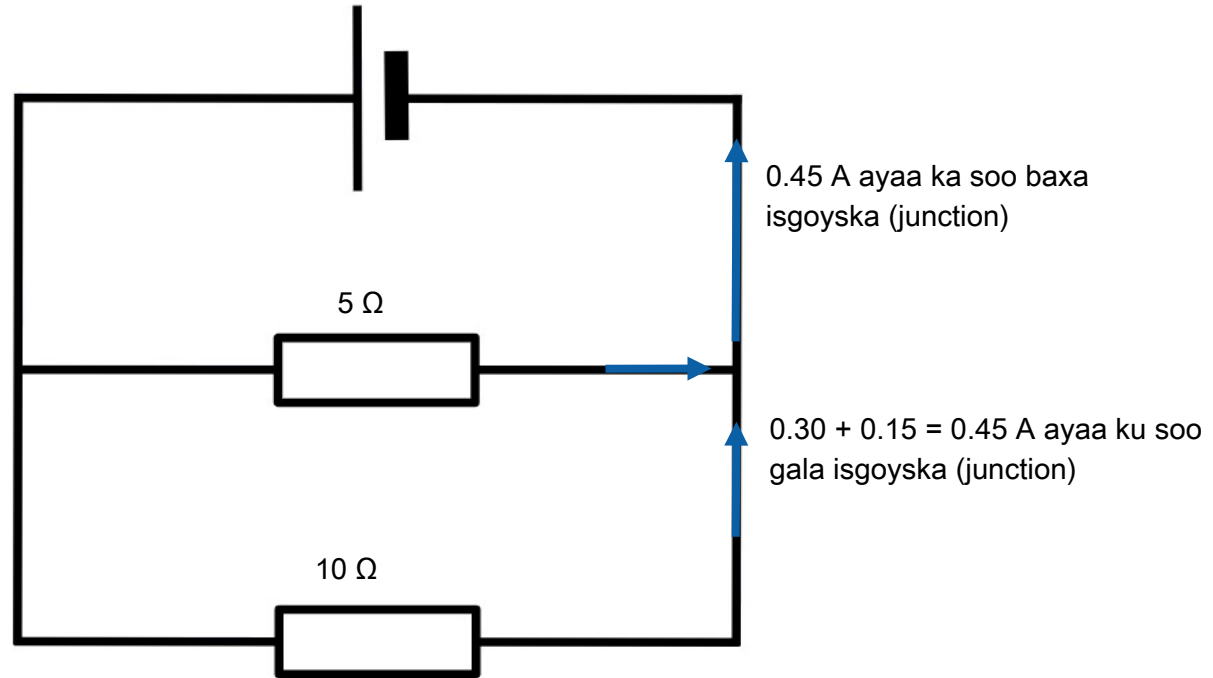
wuxuu la mid yahay hadda (current) soo baxa

Qaanuunka hadda (current) ee wareegyada barbar socda (parallel circuits)

Wadarta hadda (current) soo gala iyo ka soo baxa isgoyska (junction) waa isku mid.



Wadarta hadda (current) soo gala iyo ka soo baxa isgoyska (junction) waa isku mid.



Qaanuunka hadda (current) ee wareegyada barbar socda (parallel circuits)

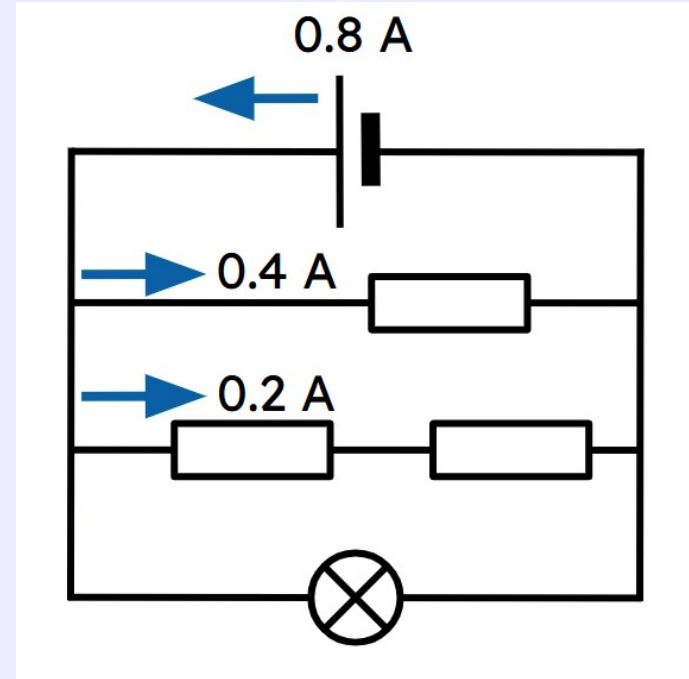
Waa imisa hadda (current) dhex mara laydhka (lamp) ee wareegga la muujiyey?

a 0.2 A ✓

b 0.4 A

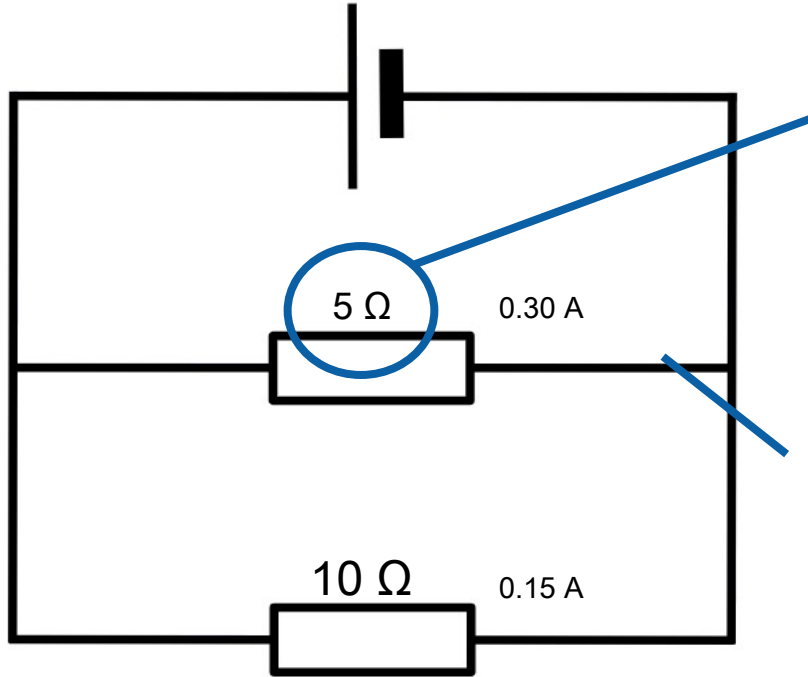
c 0.6 A

d 0.8 A



Qaanuunka hadda (current) ee wareegyada barbar socda (parallel circuits)

Hadda (current) ee laanta (branch) leh iska caabbin (resistance) hoose ayaa sareeya.



Qaanuunka hadda (current) ee wareegyada barbar socda (parallel circuits)

Kee ka mid ah kuwan soo socda ayaa si sax ah u bixiya hadda (current) dhex mara iska caabbinta (resistor) iyo laydhka (lamp) ee wareegga la muujiyey?

a

iska caabbinta (resistor) 0.6 A laydhka (lamp) 0.6 A

b

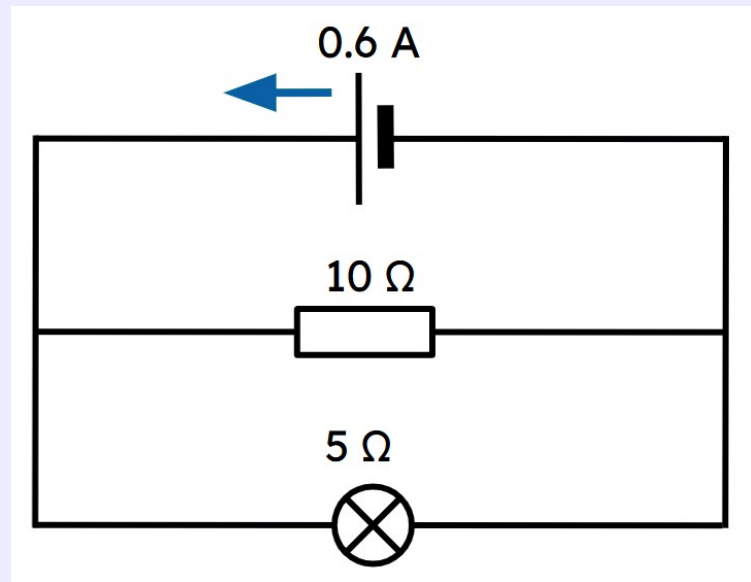
resistor (iska-horimaad) 0.6 A laydh 0.4 A

c

resistor 0.3 A laydh 0.3 A

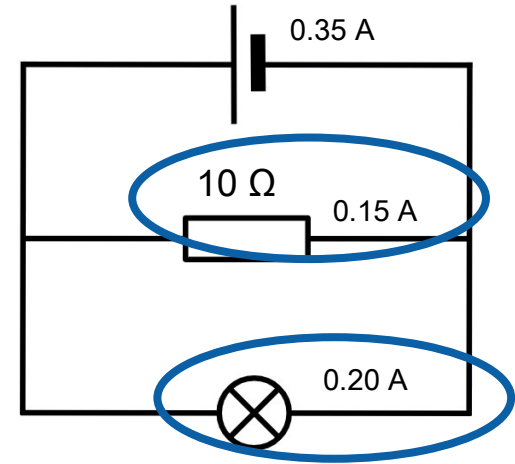
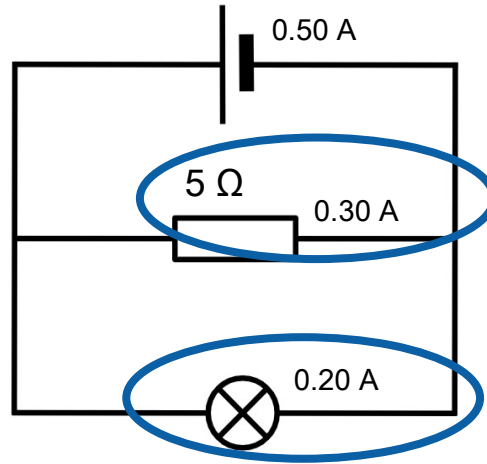
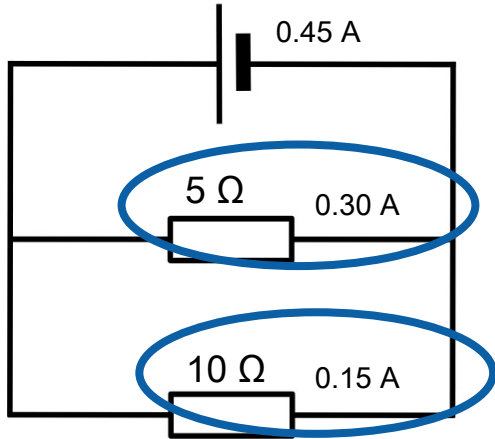
d

resistor 0.2 A laydh 0.4 A



Qaanuunka hadda (current) ee wareegyada barbar-socda (parallel circuits)

Unug isku mid ah, hadda (current) maraya qaybaha isku midka ah (iska-horimaad (resistance) isku mid ah) waa isku mid.



Qaanuunka hadda (current) ee wareegyada barbar-socda (parallel circuits)

Run mise been?

Hadda maraya laydhka ee wareegga la muujiyey wuxuu noqon doonaa 0.3 A haddii uu leeyahay iska-horimaad (resistance) ah $7\ \Omega$.



Run



Been

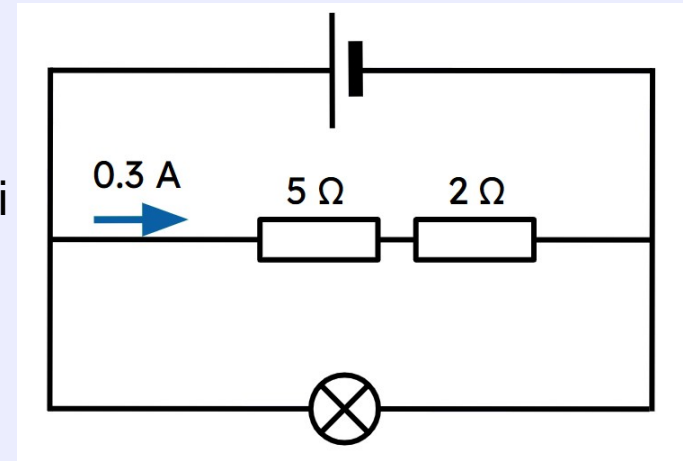
Sabab u sheeg jawaabtaada

a

Qaybaha yar ee laan ka mid ah waxay sababi doonaan in hadda (current) isbedelo.

b

Kalawadhnimada (voltage) ku riixaysa hadda (current) laan kasta waa isku mid.



Layla iyo Cabdi waxay dhiseen wareegga la muujiyey waxayna saadaalinayaan cabbirka hadda (current) ee maraya laydhka iyo resistor-ka.

Hadda weyn (current) ayaa maraysa resistor-ka marka loo eego laydhka sababtoo ah wuxuu leeyahay iska-horimaad (resistance) yar.

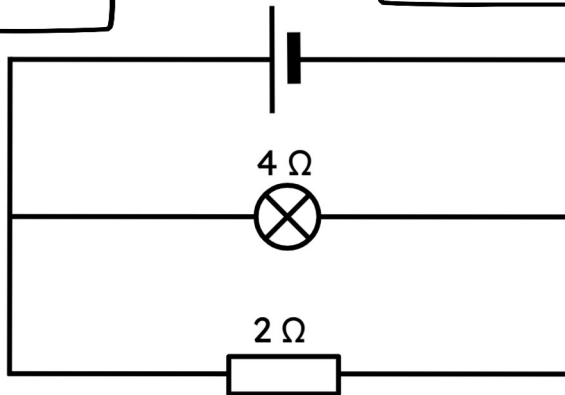


Layla

Hadda weyn (current) ayaa maraysa laydhka marka loo eego resistor-ka sababtoo ah waxay u dhowdahay unuga.



Cabdi



Sheeg in arday kastaa sax yahay iyo in qaldan yahay oo sharax sababta?

Sheeg in arday kastaa sax yahay iyo in qaldan yahay oo sharax sababta?

Layla waa sax, Cabdina waa qaldan.

Kalawadhnimada (voltage) labada laan waa isku mid.

Waxaa jiri doonta hadda (current) weyn oo dhex maraysa resistor-ka maadaama uu leeyahay iska-horimaad (resistance) ka yar kan laydhka.

Masaafada qaybaha ka fog unugu saamayn kuma leh hadda (current) sababtoo ah fiilooyinku iskama hortagaan hadda (current).

Soo koobid

Cabbirka hadda (current) ee wareegga barbar socda (parallel circuit)

Wareegga barbar socda (parallel circuit), hadda (current) wuxuu ku qulqulaa dhammaan laamaha.

Hadda (current) wuxuu ku kala qaybsamaa isgoysyada (junctions), wadarta hadda ee gasha isgoyska waa la mid ah wadarta hadda ee ka soo baxda isgoyska.

Marka la cabbirayo hadda (current) ee loop-ka, ammeter waa in la dhigaa inta u dhaxaysa isgoysyada (junctions) ee cidhifyada loop-ka.

Loop kastaa wuxuu yeelan doonaa voltage isku mid ah, markaa hadda (current) ee loop-ka wuxuu ku xiran yahay iska caabinta (resistance) ee loop-ka. Iska caabin sare waxay siin doontaa hadda hoose.