ARETXABALETA
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BASIC ELECTRICAL CIRCUITS

ELECTRICITY EXERCISES

1. We have connected a 15KΩ resistor to a 60V power source. Calculate the intensity value

2. If an intensity of 50mA passes through a resistance of 2K2Ω, what is the value of the voltage?

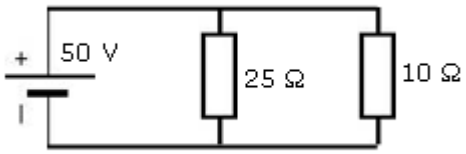
3. Three resistors R1=20Ω, R2=40Ω and R3=40Ω are connected in series. If the potential difference across resistor R1 is 50V, what is the battery voltage?

4. We connect 4 resistors in series to a 24V battery. The value of the three resistors is known, they are all 4KΩ. We have measured the voltage drop in such a resistor and the value is 4V. Calculate the value of the fourth resistor.

5. We have 3 resistors connected in parallel: R1=20Ω, R2=40Ω and R3=40Ω. The current flowing through R1 is 6A. Calculate the equivalent resistance and the value of the intensity provided by the battery.

6. We connected two resistors R1=400Ω and R2 in parallel. The intensity provided by the battery is 1A and the intensity passing through R1 is 600mA. Calculate the value of R2.

7. Calculate:
   - The intensity of the current flowing through each resistor
   - Equivalent resistance (R_B)



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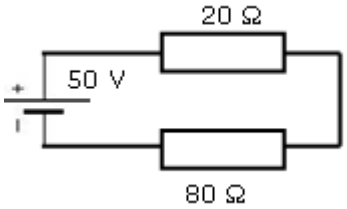
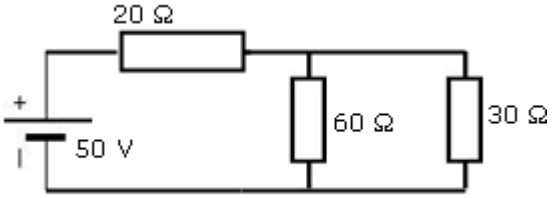
8. Calculate:

The voltage drop experienced by each resistance
Equivalent resistance (R_B)



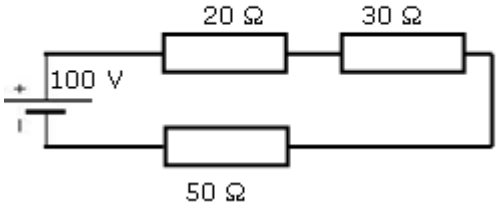
9. Calculate:

The intensity of the current flowing through each resistor The voltage drop experienced by each resistor Equivalent resistance (R_B)



10. Calculate:

The voltage drop experienced by each resistance
Equivalent resistance (R_B)



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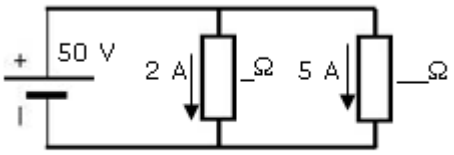
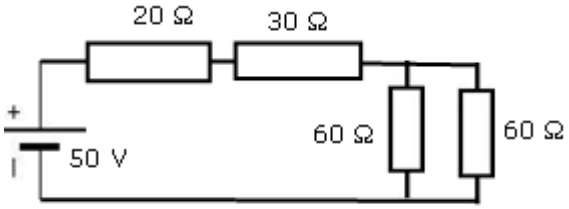
11. Calculate:
The value of each resistor



12. Calculate:

- The intensity of the current flowing through each resistor
- The voltage drop experienced by each resistor
- Equivalent resistance (R_B)



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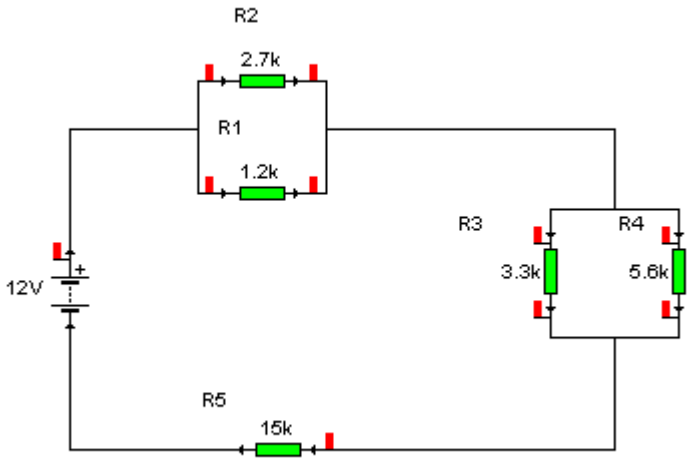
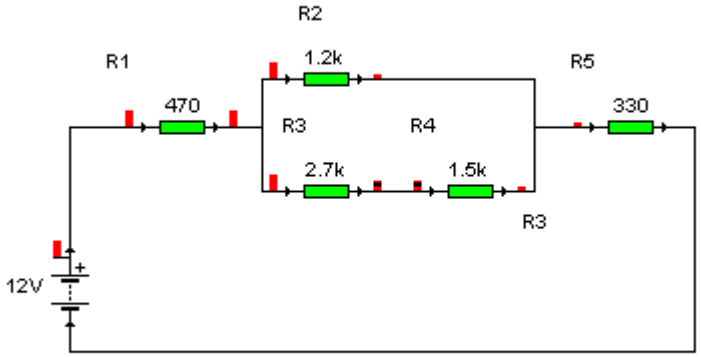
13. Calculate the voltage drop across resistors R3 and R4



14. Calculate the power absorbed by R4



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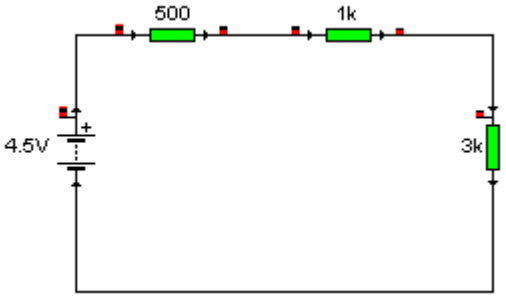
15. Calculate the following circuits:

a) Equivalent resistance

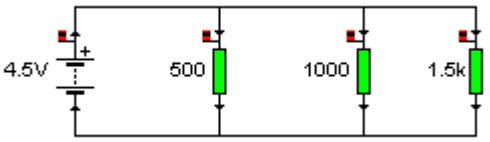
b) All the intensities that can be found in the circuit

c) Voltage drops in each resistor

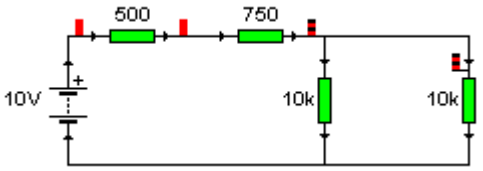
1. CIRCUIT:



CIRCUIT 2:



3. CIRCUIT:



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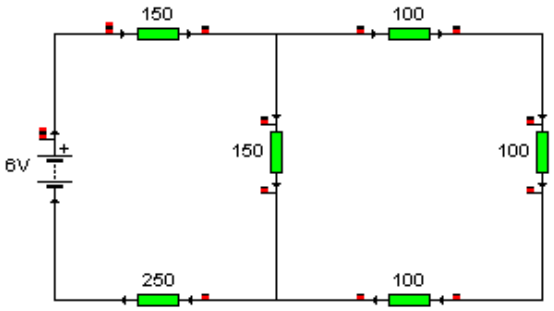
16. Calculate them in the circuit shown below:

a) Equivalent resistance

b) All the intensities that can be found in the circuit

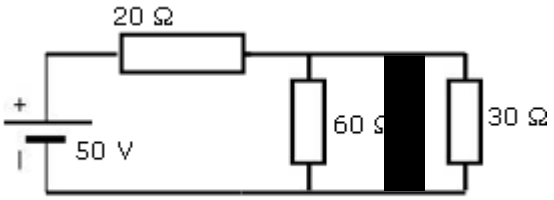
c) Voltage drops in each resistor

d) Power dissipated in each resistor



17. Calculate:

The intensity of the current flowing through each resistor The voltage drop experienced by each resistor Equivalent resistance (R_B)



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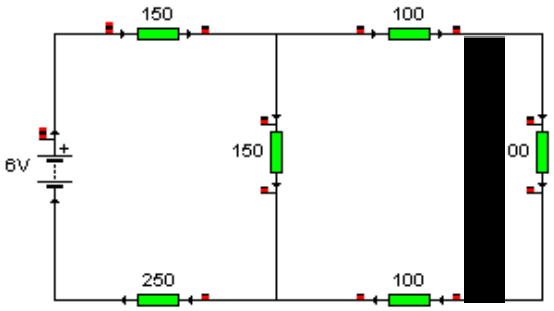
18. Calculate them in the circuit shown below:

a) Equivalent resistance

b) All the intensities that can be found in the circuit

c) Voltage drops in each resistor

d) Power dissipated in each resistor



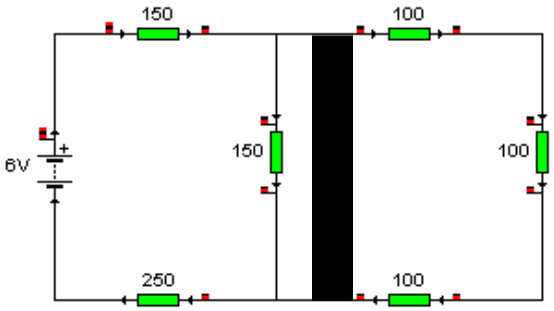
19. Calculate them in the circuit shown below:

a) Equivalent resistance

b) All the intensities that can be found in the circuit

c) Voltage drops in each resistor

d) Power dissipated in each resistor



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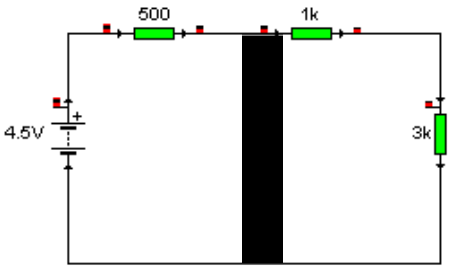
20. Calculate the following circuits:

a) Equivalent resistance

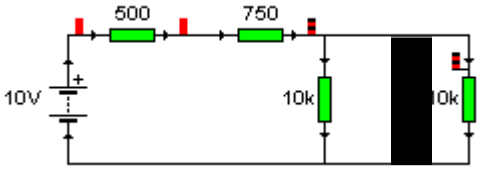
b) All the intensities that can be found in the circuit

c) Voltage drops in each resistor

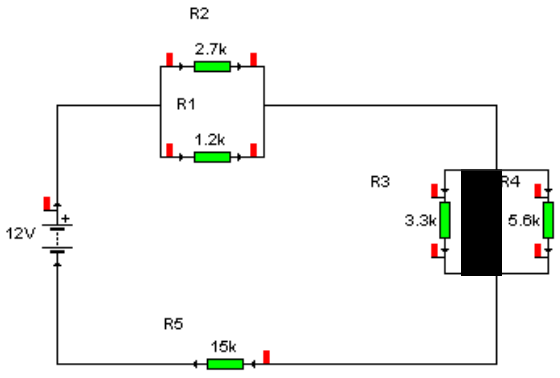
1. CIRCUIT:



2. CIRCUIT:



3. CIRCUIT



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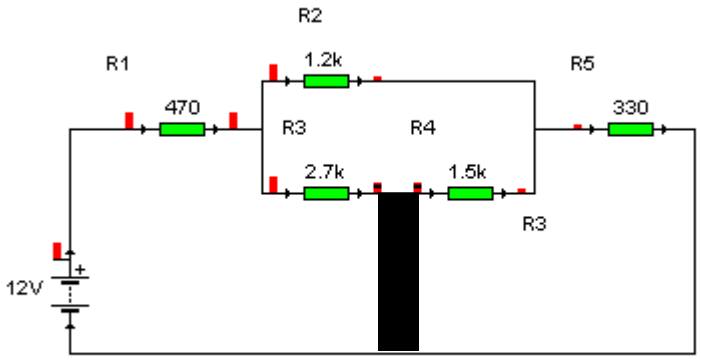
21. Calculate the power absorbed by R4



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