

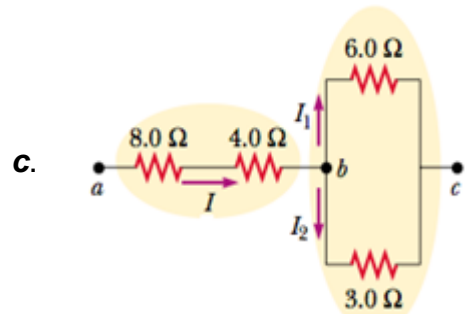
Physique 02

Series. N°4 :

Exercise 1 :

Four resistors are connected as shown in Figure .1.

1. **Find** the equivalent resistance between points **a** and **b**.
2. **What** is the current in each resistor if current difference of 42V is maintained between **a** and **b**



Exercise 2 :

Three resistors are connected in parallel as shown in Figure .2.

A potential difference of 18 V is maintained between points **a** and **b**.

1. **Calculate** the equivalent resistance of the circuits.
2. **Find** the current in each resistor.
3. **Calculate** the power delivered to each resistor and the total power delivered to the combination of resistors.

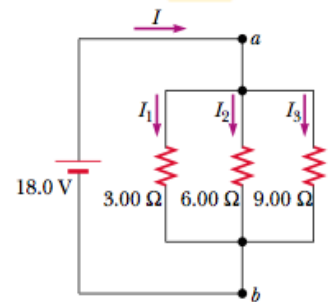
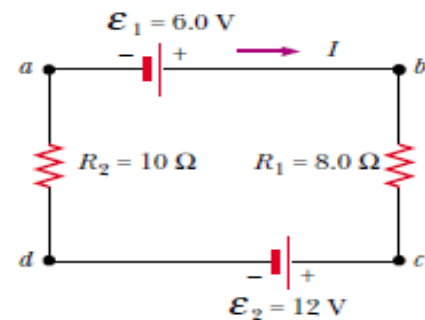


Figure 02

Exercise 3:

1. **Find** the current in circuit (Figure .3).
2. **What** power is delivered to each resistor? **What** power is delivered by the 12 V battery?

Figure 03



Exercise 4:

- Given is the multi-loop circuit as shown in Figure .4. Which of the following statements cannot be true:
- A) $i_1 - i_3 - i_4 = 0$
- B) $i_1 R_1 - i_3 R_3 - i_6 R_6 - i_4 R_4 = 0$
- C) $i_3 R_3 - i_6 R_6 - i_4 R_4 = 0$
- D) $V - i_1 R_1 - i_3 R_3 - i_2 R_2 = 0$

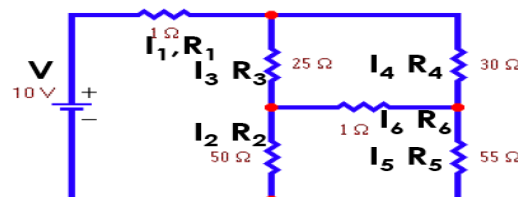
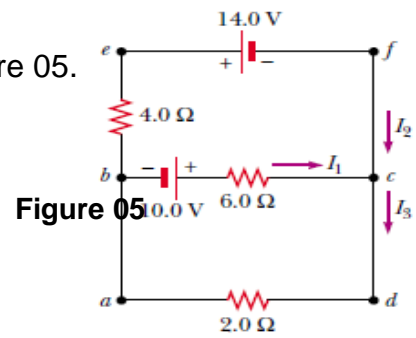


Figure 04

Exercise 5:

- Find the current I_1 , I_2 and I_3 in the circuit shown in figure 05.



Exercise 6:

- Find the current I_1 , I_2 and I_3 in the circuit shown in figure .6.

Figure

