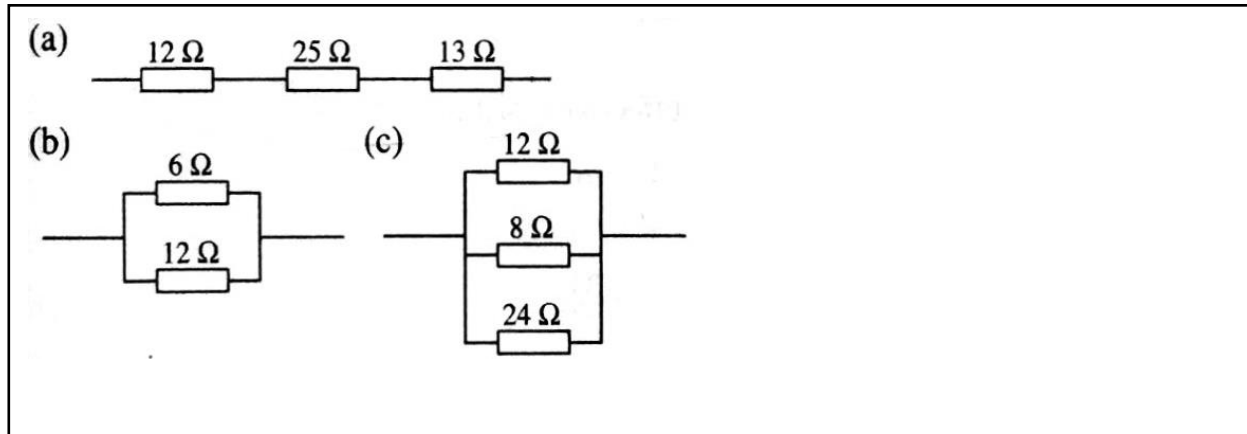


Signature: Name: Marks:

Series and Parallel Circuits

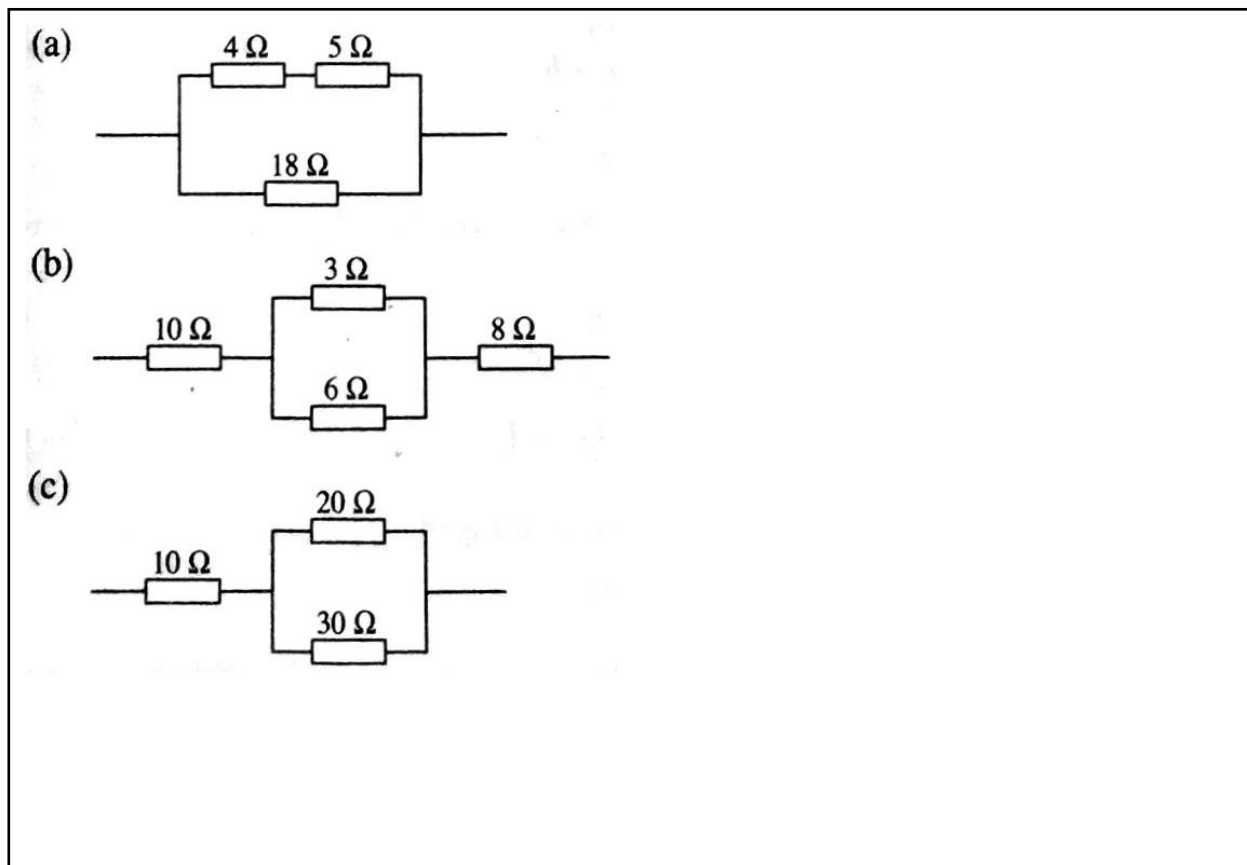
Q1.

Calculate the effective resistance in each of the following arrangement of resistors.



Q2.

Calculate the effective resistance in each of the following arrangement of resistors.

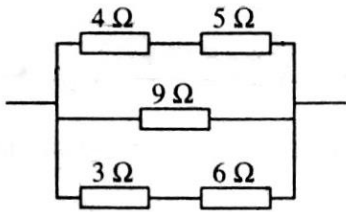


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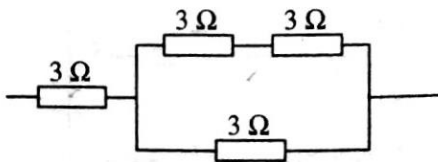
Name:

Marks:

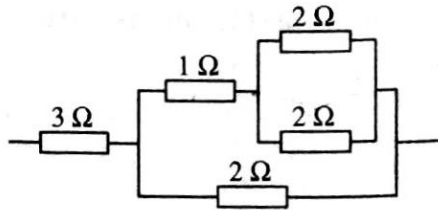
(d)



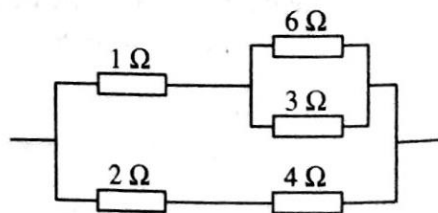
(e)



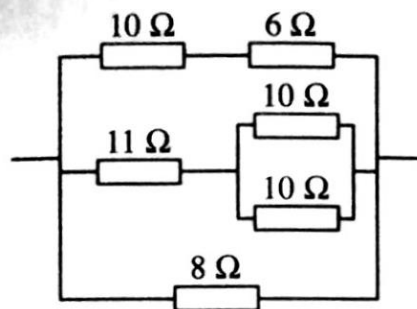
(f)



(g)

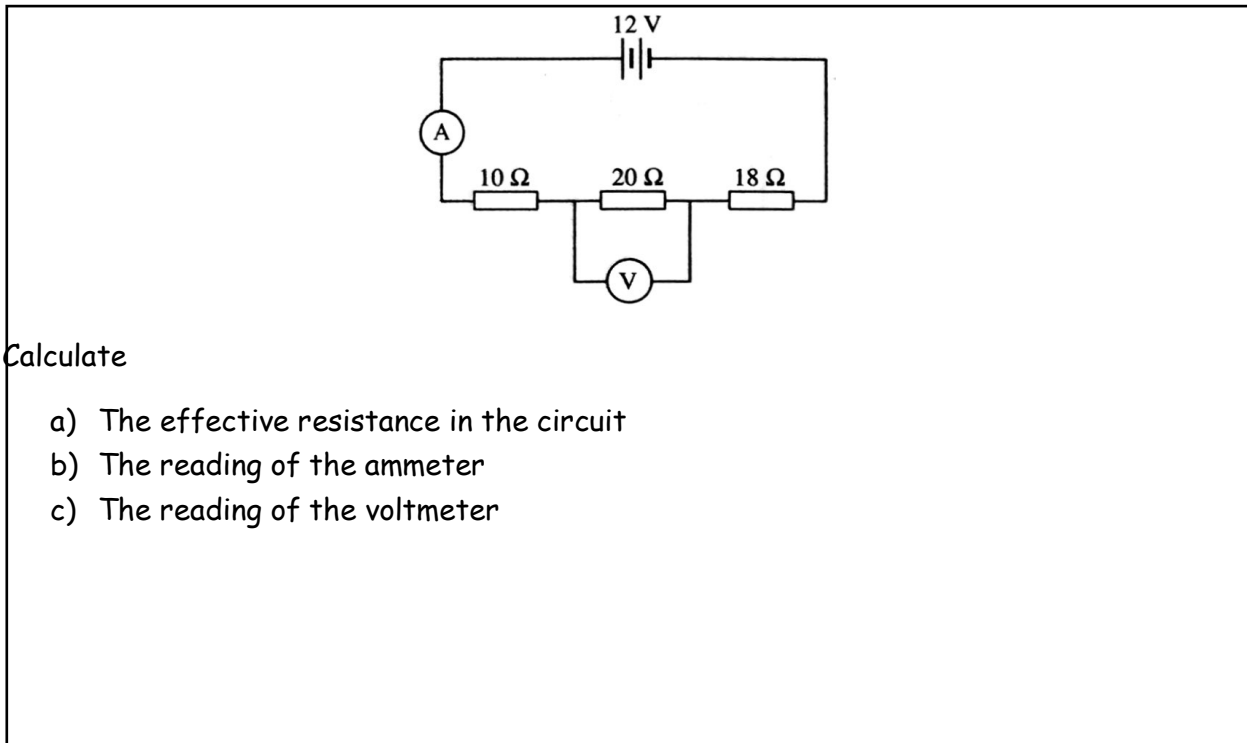


(h)

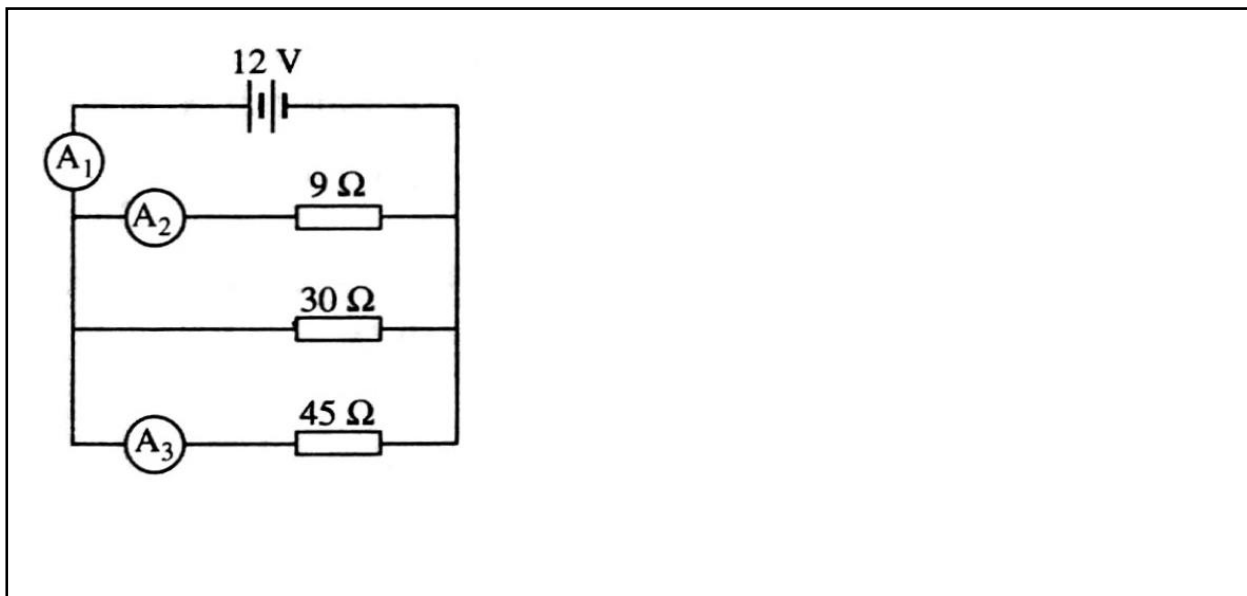


Signature: Name: Marks: **Q3.**

The figure below shows an electrical circuit with three resistors connected in series.

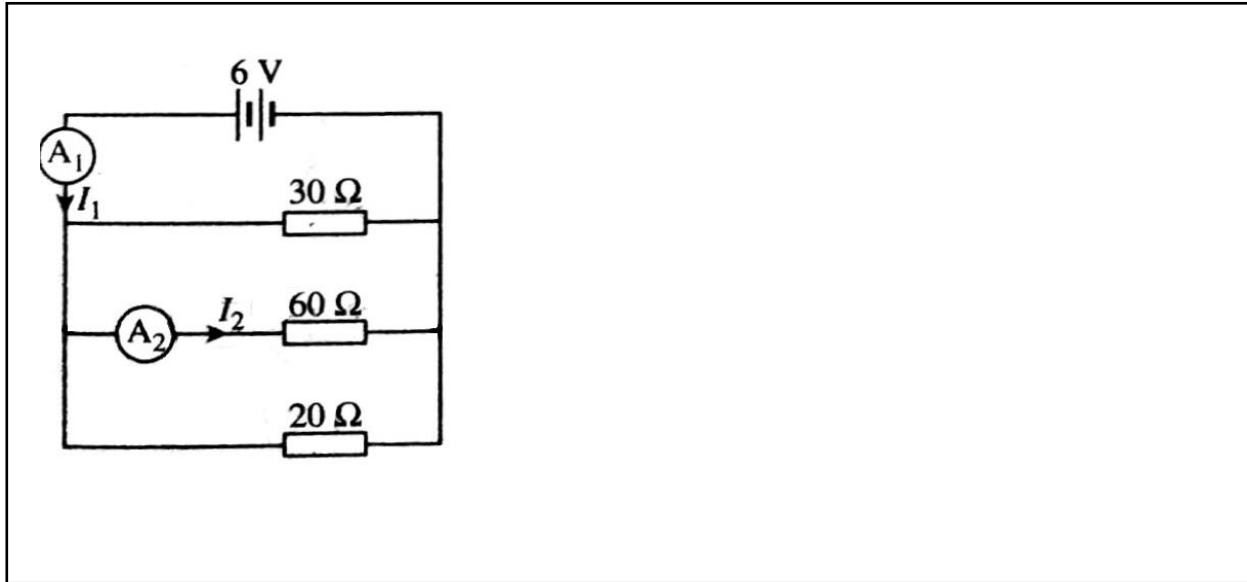
**Q4.**

The figure below shows three resistors connected in parallel in a circuit. Calculate the readings of ammeters A_1 , A_2 and A_3 respectively.

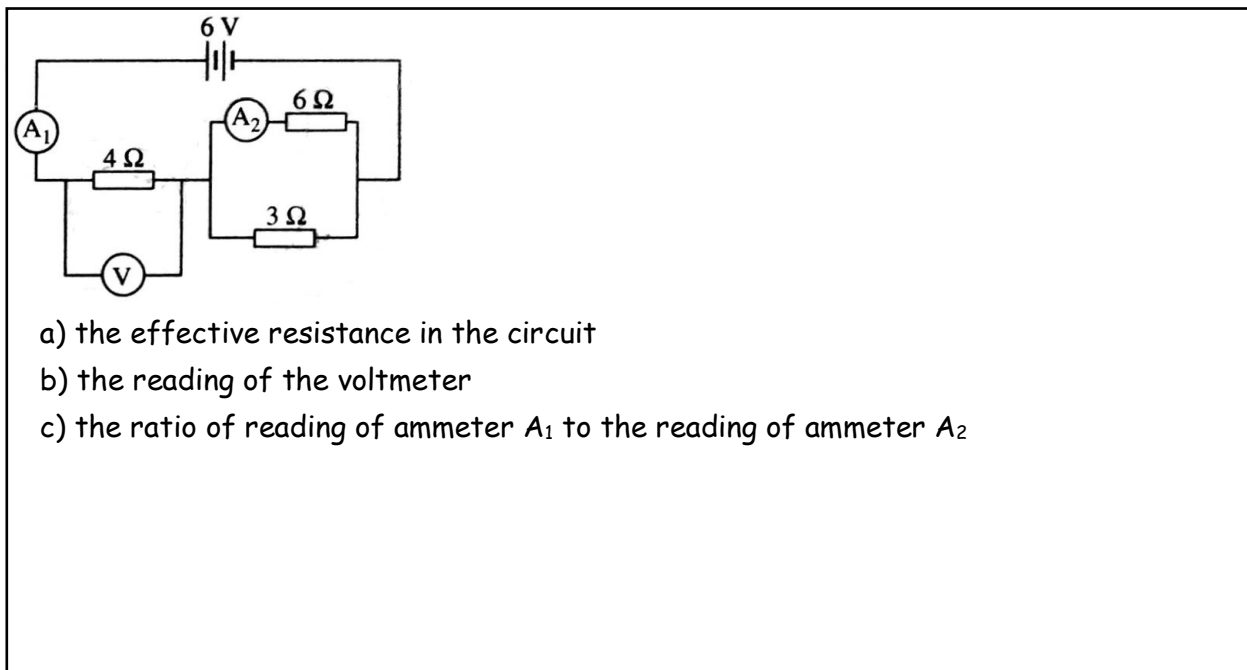


Signature: Name: Marks: **Q5.**

Three resistors are connected in parallel as shows in the figure below. Calculate the ratio of $I_1:I_2$

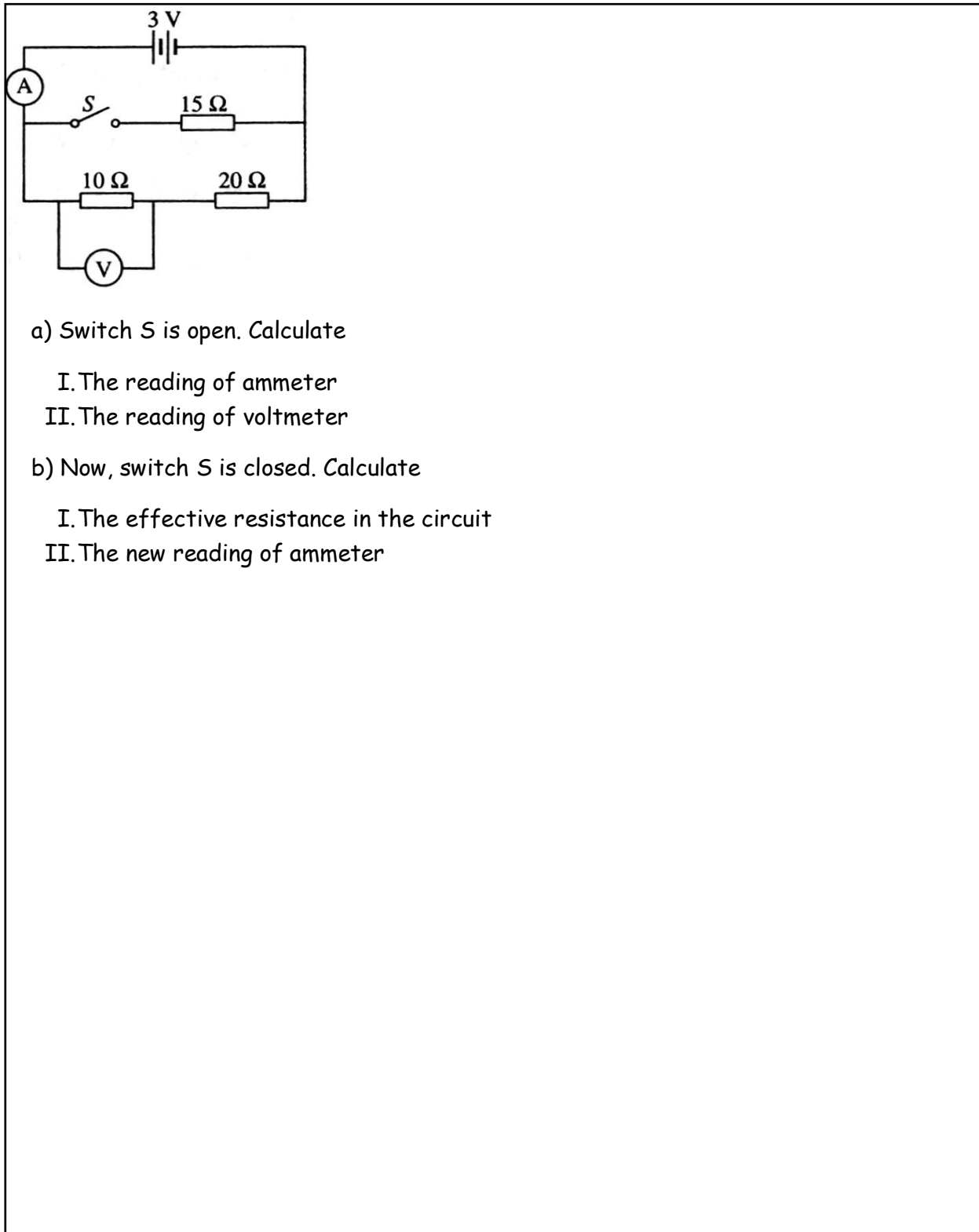
**Q6.**

The figure below shows an electrical circuit. Calculate



Signature: Name: Marks: **Q7.**

The figure below shows an electrical circuit.



a) Switch S is open. Calculate

I. The reading of ammeter

II. The reading of voltmeter

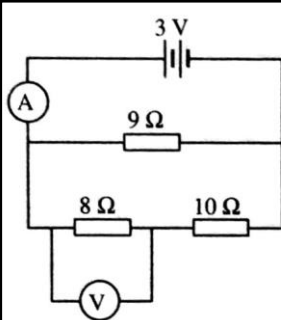
b) Now, switch S is closed. Calculate

I. The effective resistance in the circuit

II. The new reading of ammeter

Signature: Name: Marks: **Q8.**

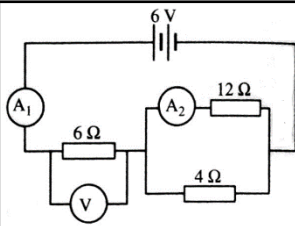
The figure below shows an electrical circuit. Calculate



- the effective resistance in the circuit
- the reading of the ammeter
- the reading of the voltmeter
- the current flowing across the $8\ \Omega$ resistor
- the power dissipated in the $8\ \Omega$ resistor

Signature: Name: Marks: **Q9.**

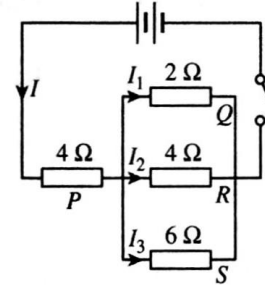
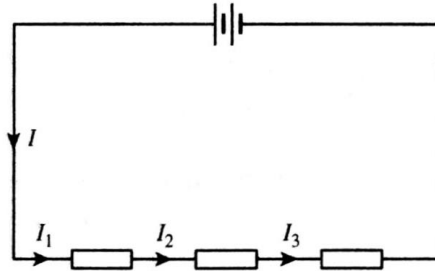
The figure below shows an electrical circuit. Calculate



- the effective resistance in the circuit
- the reading of both ammeters
- the ratio of the power dissipated in the $6\ \Omega$ resistor to that in the $12\ \Omega$ resistor

Signature: Name: Marks: **Q10.**

The figures below shows two electrical circuits.



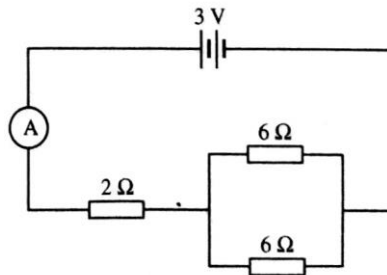
a) Which diagram shows a series circuit?

b) Write the relationship between the current I_1 , I_2 and I_3 for both circuits.

I. Left diagram

II. Right diagram

c) The following diagram shows an electrical circuit connected to a battery supply with negligible internal resistance.



I. What is the effective resistance in the circuit?

II. Determine the reading of the ammeter.

III. The $2\ \Omega$ resistor is then removed from the circuit and replaced by a connecting wire. What will happen to the reading of the ammeter?