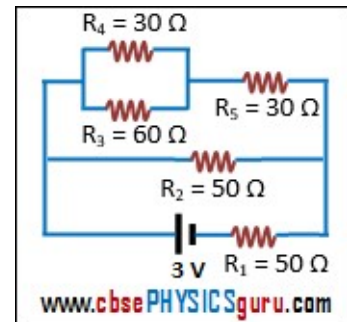
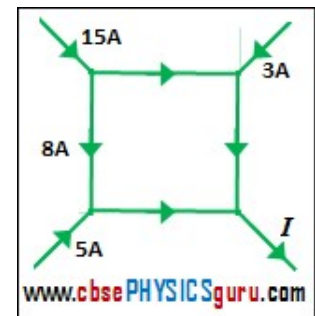


KIRCHHOFF'S LAWS AND WHEATSTONE BRIDGE

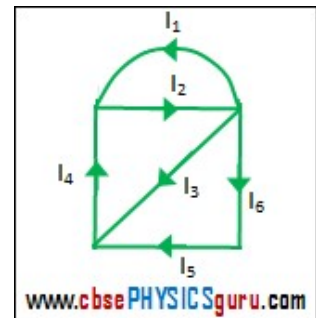
1. In the given circuit voltage across resistance R_4 is:
 (a) 0.2 V (b) 0.4 V (c) 0.6 V (d) 0.8 V



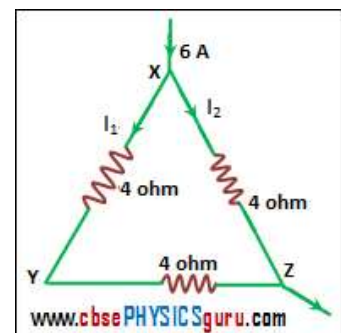
2. The figure shows a network of currents. The magnitude of current is shown here. The current I will be:
 (a) 3 A (b) 9 A (c) 13 A (d) 23 A



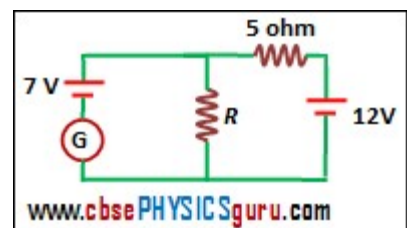
3. In the following network of 5 branches, the currents are shown. Given that $I_1 = -0.5$ A, $I_4 = 1$ A and $I_5 = 1.5$ A, the remaining currents are:
 (a) $I_2 = -1.5$ A, $I_3 = 0.5$ A and $I_6 = 0.5$ A (b) $I_2 = 0.5$ A, $I_3 = -0.5$ A and $I_6 = 1.5$ A (c) $I_2 = -1.5$ A, $I_3 = 0.5$ A and $I_6 = -0.5$ A (d) $I_2 = 1.5$ A, $I_3 = 0.5$ A and $I_6 = 0.5$ A



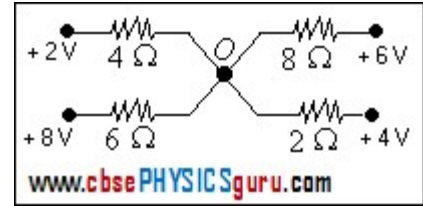
4. A current of 6 A enters one corner X of an equilateral triangle XYZ having 3 wires of resistances 4 ohm each and leaves by the corner Z. Then the currents I_1 and I_2 are respectively:
 (a) 2 A, 4 A (b) 4 A, 2 A (c) 1 A, 2 A (d) 2 A, 3 A



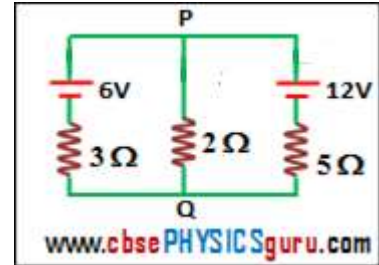
5. The value of R for which the current in galvanometer will be zero:
 (a) 7 Ω (b) 6 Ω (c) 5 Ω (d) 1 Ω



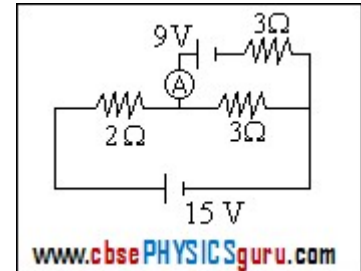
6. The potential of the junction O in the given diagram is:
 (a) 4.4 V (b) -4.4 V (c) 2.2 V (d) 10 V



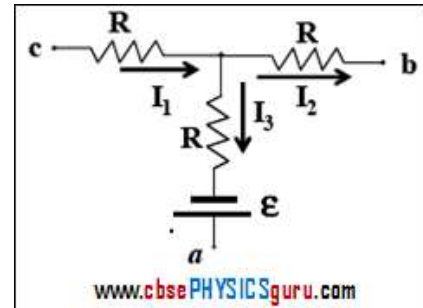
7. The current in the branch PQ in the circuit shown in the figure is:
 (a) 12/31 A (b) 3 A (c) 66/31 A (d) 5/31 A



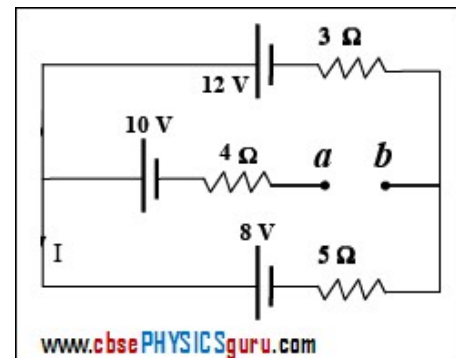
8. The reading of the ammeter in given circuit will be:
 (a) 2 A (b) 3 A (c) 0 A (d) 0.5 A



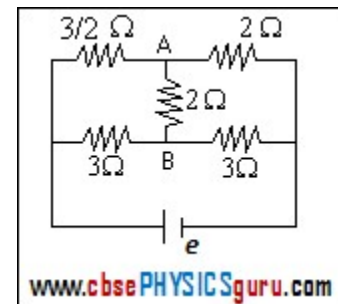
9. The figure shows a part of a circuit; the correct statement for the potential difference ($V_b - V_a$) is:
 (a) $\mathcal{E} - I_3R - I_2R$ (b) $-\mathcal{E} - I_3R - I_2R$ (c) $-\mathcal{E} - I_3R + I_2R$ (d) $-\mathcal{E} + I_3R - I_2R$



10. The current passing through the 5Ω resistor and the potential difference between points a and b in the circuit shown:
 (a) 0.5 A, 0.5V (b) 1.5 A, 1.5 V (c) 2.5 A, 1.0 V (d) 1.0 A, 0.5V

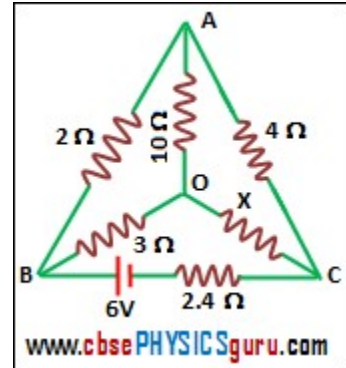


11. For the circuit shown:
 (a) $V_A < V_B$ (b) $V_A = V_B$ (c) $V_A > V_B$ (d) Depends on the emf of the battery



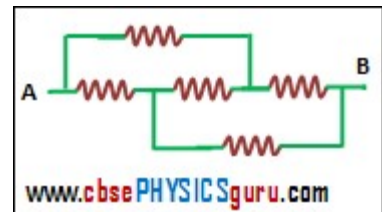
12. The value of the unknown resistance X , in the circuit shown in figure, if no current flows through the section AO and the current drawn by the circuit from the battery of emf 6 V and negligible internal resistance are respectively:

(a) $8\ \Omega$, 1 A (b) $6\ \Omega$, 1 A (c) $5\ \Omega$, 2 A (d) $1\ \Omega$, 3 A



13. The resistance between the points A and B of the circuit in the figure is (The resistance of each resistor is 20 ohm):

(a) 40 ohm (b) 50 ohm (c) 20 ohm (d) 80 ohm



14. In the circuit shown in figure, the current passing through battery is:

(a) $7V/5R$ (b) $5V/7R$ (c) $5V/3R$ (d) $3V/7R$

