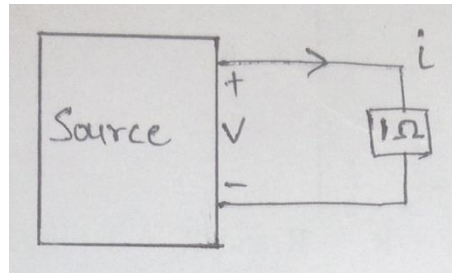
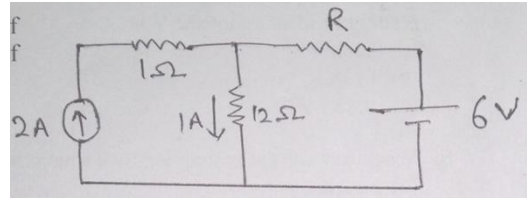


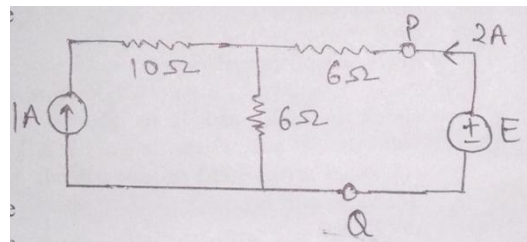
1. As shown in figure a 1Ω resistance is connected across a source that has a load $v + i = 100$. The current through the resistance is



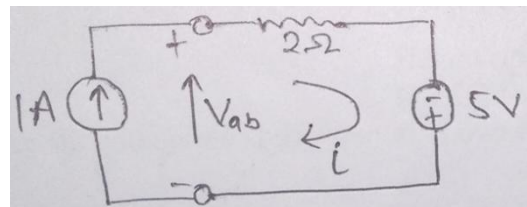
- (a) 25 A
 (b) 50 A
 (c) 100 A
 (d) 200 A
2. If the 12Ω resistor draw a current of 1A as shown in figure, the value of resistance R is



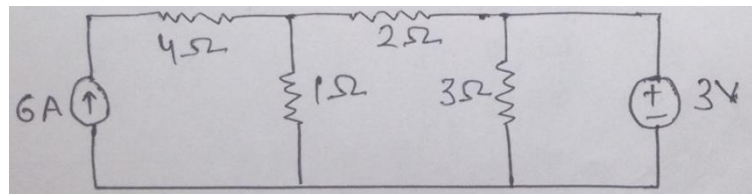
- (a) 4Ω
 (b) 6Ω
 (c) 8Ω
 (d) 18Ω
3. In the figure the value of source voltage is



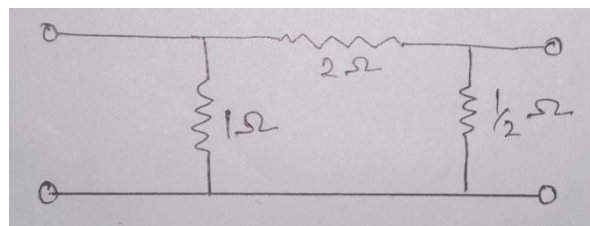
- (a) 12 V
 (b) 24 V
 (c) 30 V
 (d) 44 V
4. Assuming ideal elements in the circuit shown below, the voltage V_{ab} will be



- (a) -3 V
 (b) 0 V
 (c) 3 V
 (d) 5 V
5. In the circuit shown in the figure the voltage across the 2Ω resistor is



- (a) 6 V
 (b) 4 V
 (c) 2 V
 (d) Zero
6. Find Y parameter?



(a) $\begin{bmatrix} \frac{3}{2} & -\frac{1}{2} \\ -\frac{1}{2} & \frac{5}{2} \end{bmatrix}$

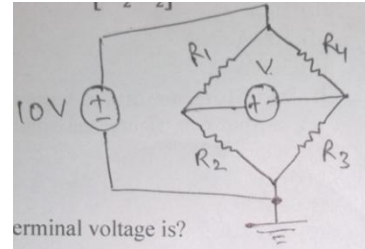
(b) $\begin{bmatrix} -\frac{3}{2} & -\frac{1}{2} \\ -\frac{1}{2} & \frac{5}{2} \end{bmatrix}$

(c) $\begin{bmatrix} \frac{3}{2} & \frac{1}{2} \\ -\frac{1}{2} & \frac{5}{2} \end{bmatrix}$

(d) $\begin{bmatrix} \frac{2}{3} & \frac{1}{2} \\ -\frac{1}{2} & \frac{5}{2} \end{bmatrix}$

7. If $R_1 = R_2 = R$ and $R_3 = 1.1 R$ in the circuit shown in figure then the reading of ideal voltmeter V is

- (a) 0.238 V
- (b) 0.138 V
- (c) -0.238 V
- (d) 1 V

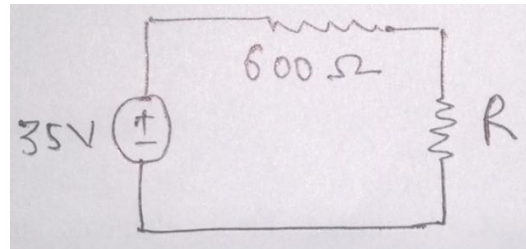


8. Whenever current is supplied by a source its terminal voltage is?

- (a) Increase
- (b) Decrease
- (c) Constant
- (d) Increase exponentially

9. A 35 V source is connected to a series circuit of 600Ω and R as shown. If a voltmeter of internal resistance $1.2\text{ K}\Omega$ is connected across 600Ω resistor it reads 5V. The value of R is

- (a) $2.4\text{ K}\Omega$
- (b) $1.2\text{ K}\Omega$
- (c) $3.6\text{ K}\Omega$
- (d) $7.2\text{ K}\Omega$



10. A two port network is defined by the relation $I_1 = 2V_1 + V_2$, $I_2 = 2V_1 + 3V_2$. Then Z_{12} is

- (a) $-1\ \Omega$
- (b) $-2\ \Omega$
- (c) $\frac{1}{4}\ \Omega$
- (d) $-\frac{1}{4}$