

MAKHA 01:

$$i_1 = 4A$$

MAKHA 02:

$$2i_2 - 5i_0 + i_2 - i_3 + 3i_2 - 3i_1 = 0$$

$$6i_2 - 5i_0 - i_3 - 3i_1 = 0$$

$$\textcircled{1} \quad 6i_2 - 5i_0 - i_3 - 12 = 0$$

MAKHA 03:

$$i_3 - i_2 + 5i_0 + 4i_3 - 20 + 5i_3 - 5i_1 = 0$$

$$10i_3 - i_2 + 5i_0 - 20 - 20 = 0$$

$$\textcircled{2} \quad 10i_3 - i_2 + 5i_0 - 40 = 0$$

$$\textcircled{1} \quad 6i_2 - 5i_0 - 4 + i_0 - 12 = 0$$

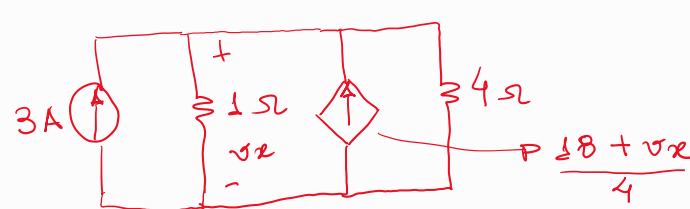
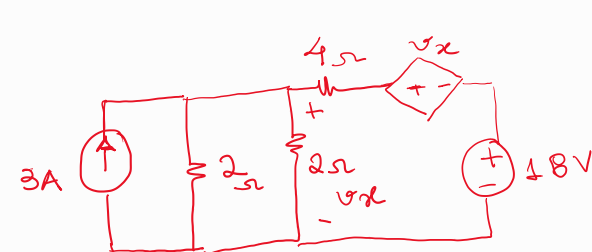
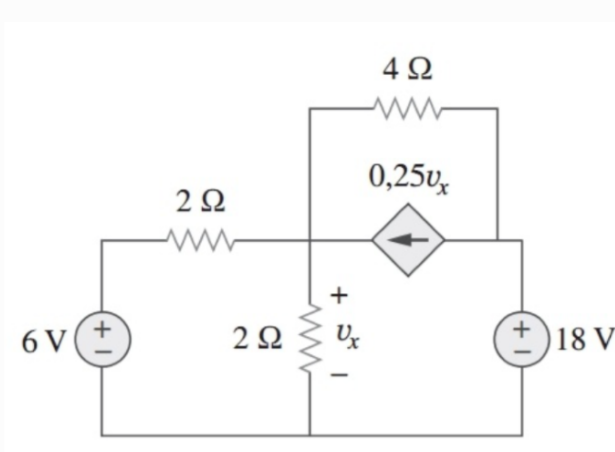
$$6i_2 - 4i_0 - 16 = 0 \Rightarrow i_2 = \frac{16 + 4i_0}{6}$$

$$\textcircled{2} \quad 10(4 - i_0) - \frac{(16 + 4i_0)}{6} + 5i_0 - 40 = 0$$

$$60(4 - i_0) - 16 - 4i_0 + 30i_0 - 240 = 0$$

$$240 - 60i_0 - 16 - 4i_0 + 30i_0 - 240 = 0$$

$$i_0 = \frac{-16}{34} = -0,47A //$$

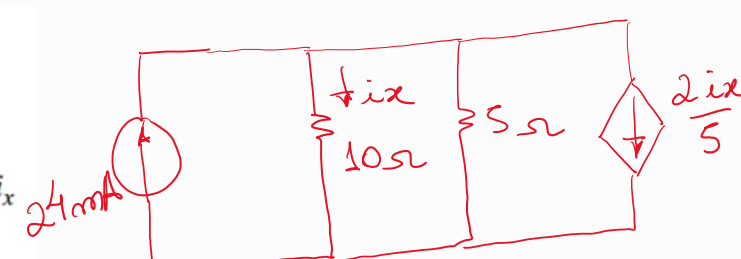
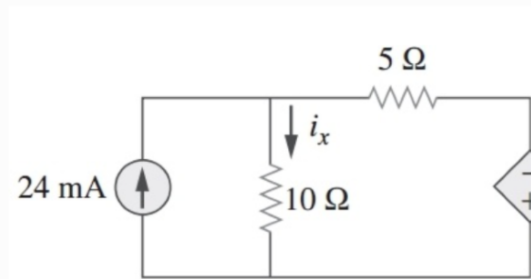


$$3 + \frac{18 + vx}{4} = \frac{vx}{5}$$

$$\left(3 + \frac{18 + vx}{4}\right) \frac{4}{5} = vx$$

$$12 + 18 + vx = 5vx$$

$$30 = 4vx \Rightarrow vx = 7,5V //$$

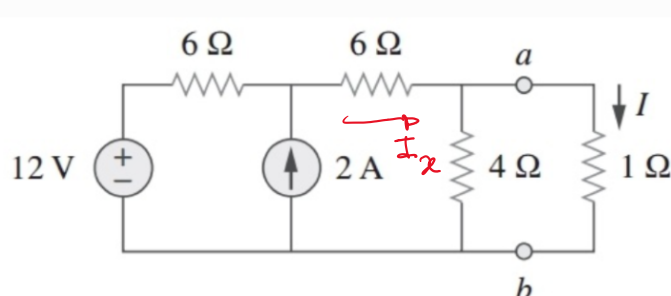


$$24mA - \frac{2ix}{5} = \frac{50 - \frac{10}{3}}{15}$$

$$\left(24mA - \frac{2ix}{5}\right) \cdot \frac{10}{3} \cdot \frac{1}{10} = ix$$

$$120mA - 2ix = 15ix$$

$$ix = \frac{120mA}{17} = 7,06mA //$$



$$2A \text{ source, } 6\Omega \text{ resistor, } 2A \text{ source, } 4\Omega \text{ resistor with current } ix, \text{ and } 1\Omega \text{ resistor.} \Rightarrow \frac{4}{5} + 6 = \frac{34}{5}$$

$$Ix = \frac{4 \times 6}{6 + \frac{34}{5}} = \frac{24}{64} \times 5$$

$$I = \frac{Ix \cdot 4}{5} = \frac{24 \times 5 \times 4}{64 \times 5} = 1,5A //$$