

$$i_1 = i_2 + i_3 = -3 + 2.5 = -0.5 \text{ A}$$

$$i_3 = \frac{V_x}{10} = \frac{4}{10} = 0.4 \text{ A}$$

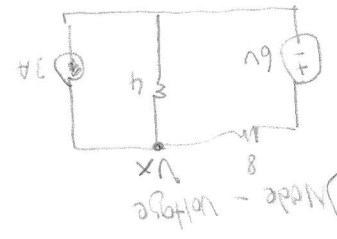
$$i_2 = -3 \text{ A}$$

$$V_x = 10$$

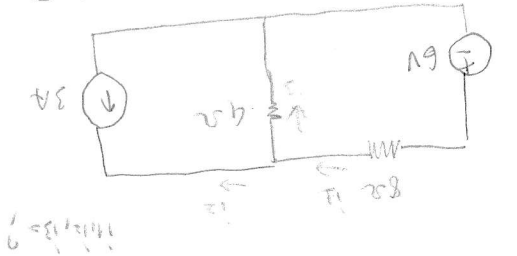
$$3V_x = 30$$

$$V_x - 6 + 2V_x = 24$$

$$\frac{8}{V_x - 6} + \frac{4}{V_x} - 3 = 0$$



① Made - Voltage



② $i_1 = i_3 = ?$

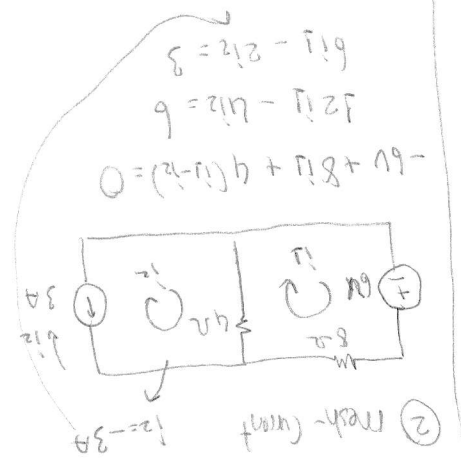
$$6i_1 + 6 = 3$$

$$6i_1 = -3$$

$$i_1 = -0.5 \text{ A}$$

$$i_2 = -3 \text{ A}$$

$$i_3 = i_1 - i_2 = -0.5 - (-3) = 2.5 \text{ A}$$



$$-6V + 8i_1 + 4(i_1 - i_2) = 0$$

$$12i_1 - 4i_2 = 6$$

$$6i_1 - 2i_2 = 3$$

② Mesh - Current

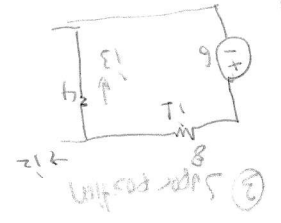
$$i_1 = -1 + 0.5 = -0.5 \text{ A}$$

$$i_2 = 0 - 3 = -3 \text{ A}$$

$$i_3 = 0.5 + 2 = 2.5 \text{ A}$$

$$i_1 = 0$$

$$i_2 = i_3 = \frac{12}{6} = 0.5$$



③ Super position

$$i_2 = -3 \text{ A}$$

$$i_3 = \frac{12}{8} \cdot 3 = 4.5 \text{ A}$$

$$i_1 = -\frac{12}{4} \cdot 3 = -9 \text{ A}$$

