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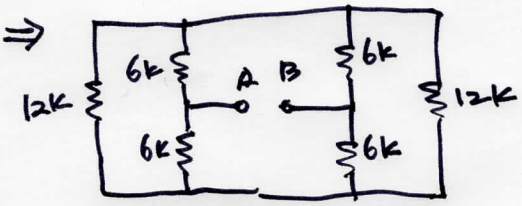
2.35 ⇒



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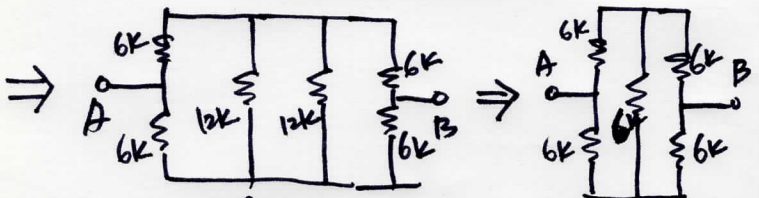

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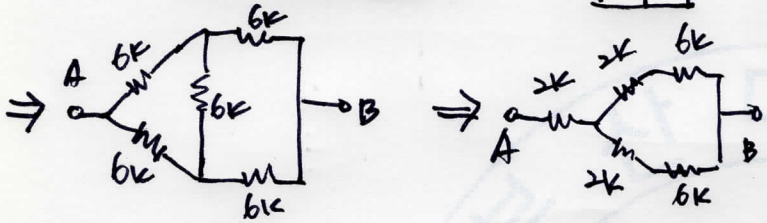
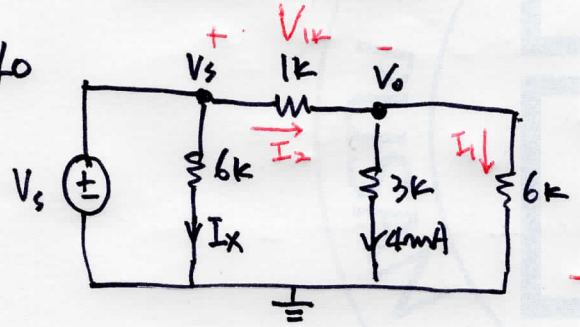


$\therefore R_{AB} = 6k\Omega$

2.40

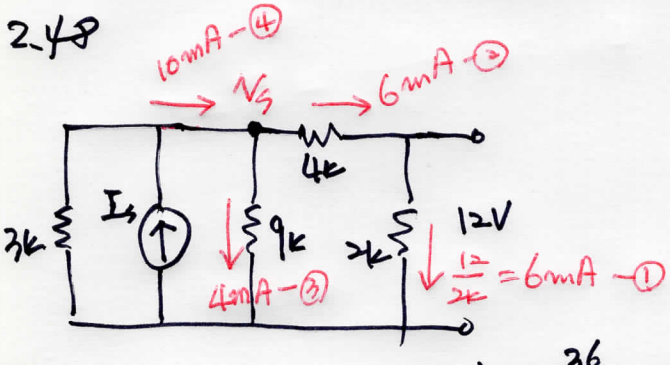


$V_o = 3k \cdot 4m = 12V \quad \therefore i_1 = \frac{12}{6k} = 2mA$

$i_2 = 4m \cdot 2m = 6mA \quad \therefore V_{1k} = 6m \cdot 1k = 6V$

$V_s = 6 + 12 = 18V \quad \therefore i_x = \frac{18}{6k} = 3mA$

2.48



$V_s = 6m \cdot 6k = 36V, \quad \therefore i_{9k} = \frac{36}{9k} = 4mA$

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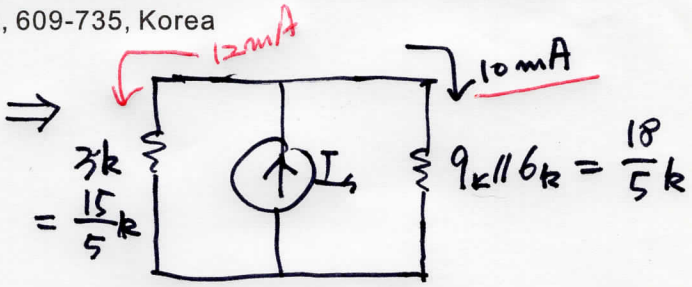
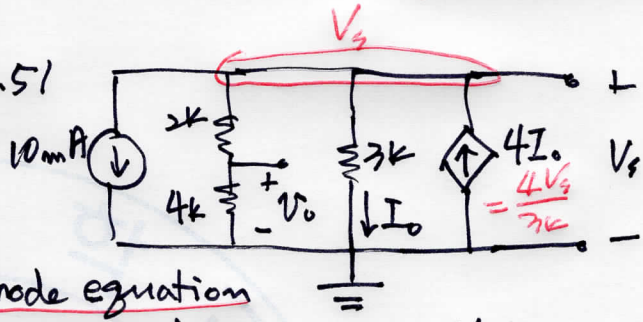


$10m = I_s \cdot \frac{15}{33} \quad \therefore I_s = 22mA$

2.51



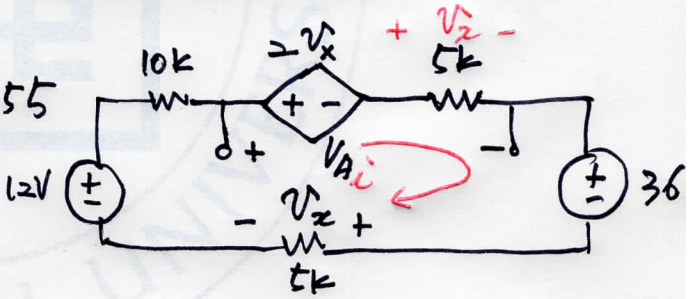
• node equation

$10m + \frac{V_s}{6k} + \frac{V_s}{3k} - \frac{4V_s}{3k} = 0$

$\frac{5V_s}{6k} = 10m \quad \therefore V_s = 12V$

$\therefore V_o = 12 \cdot \frac{4}{2+4} = 8V$

2.55



$V_A = 3V_x \qquad V_x = 5k \cdot i$

• mesh equation

$-12 + 10k \cdot i + 2V_x + 5k \cdot i + 36 + 5ki = 0$ ($2V_x \rightarrow 10k \cdot i$)

$30k \cdot i = -24 \quad \therefore i = -\frac{4}{5}mA$

$\therefore V_A = 3V_x = 15k \cdot i$

$= 15k \cdot (-\frac{4}{5}m)$

$= -12V$