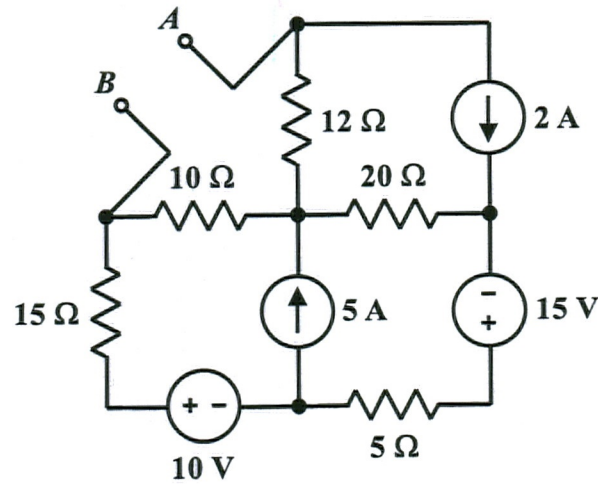
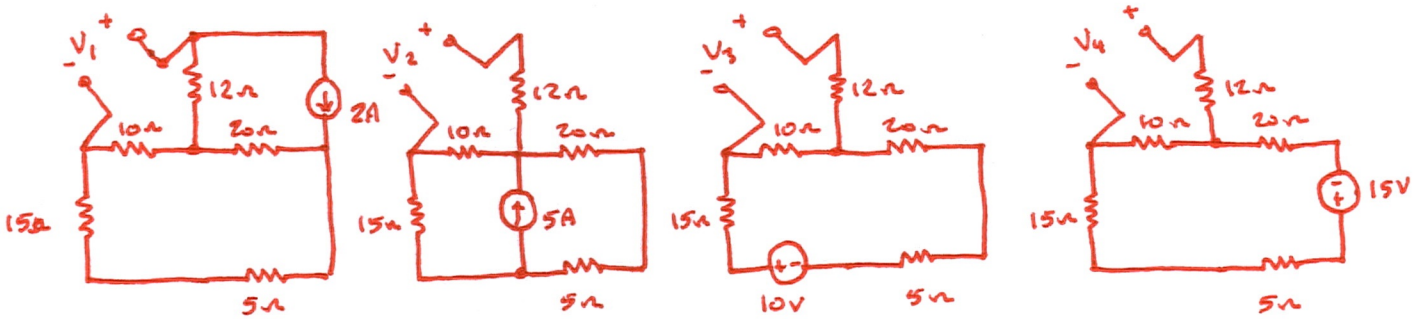


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Homework Problem #08



Use the superposition method to determine V_{AB} .



$$V_1 = -(10\Omega) \left(\frac{3\Omega}{30\Omega} \right) (2A) - (2\Omega)(2A)$$

$$= -8 - 24$$

$$= -32V$$

$$V_2 = (10\Omega) \left(\frac{25\Omega}{50\Omega} \right) (5A)$$

$$= 25V$$

$$V_3 = - \frac{10\Omega}{50\Omega} (10V)$$

$$= -2V$$

$$V_4 = - \frac{10\Omega}{50\Omega} (15V)$$

$$= -3V$$

$$V_{AB} = V_1 + V_2 + V_3 + V_4$$

$$= -32 + 25 - 2 - 3$$

$$= -12V$$