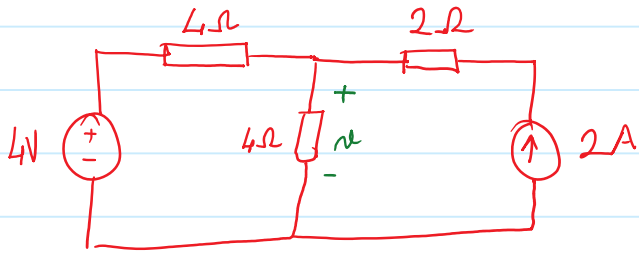
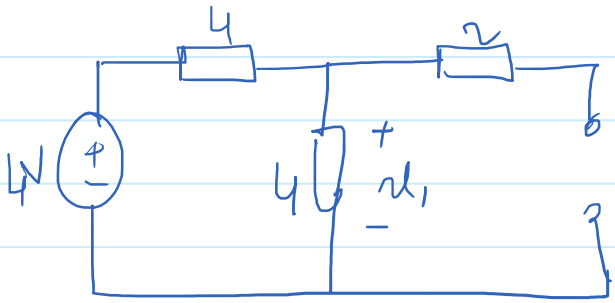
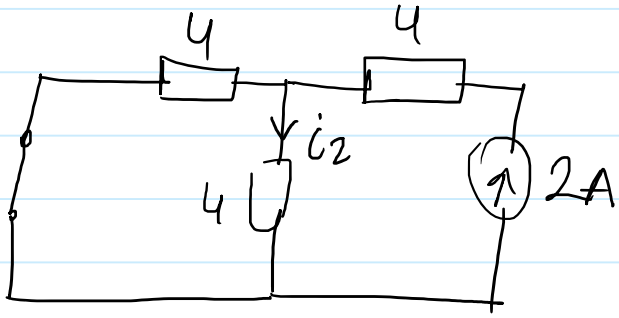
Q1



v=? Use superposition



$$v_1 = \frac{4}{4+4} \cdot 4 = 2V$$



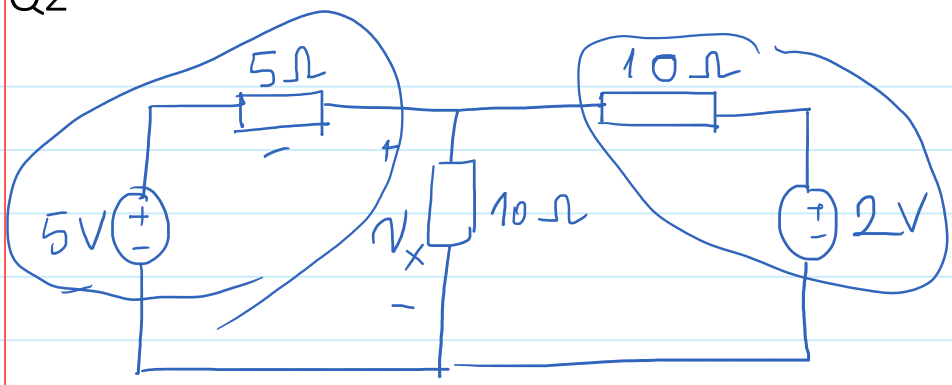
$$i_2 = \frac{2}{4+4} \quad 4 = 1A$$

$$v_2 = 4 . i_2 = 4V$$

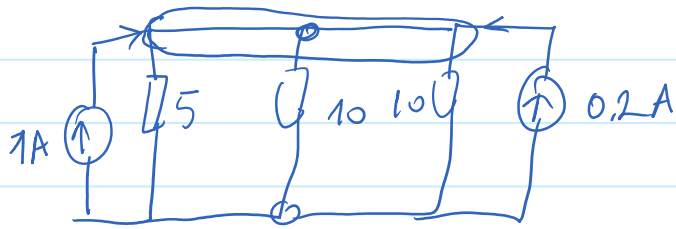
$$v = v_1 + v_2 = 2 + 4 = 6V$$

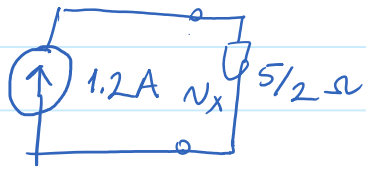
Answer : $v_1 + v_2 = 2+4 = 6V$

Q2



Use source transformation to calculate v_x.

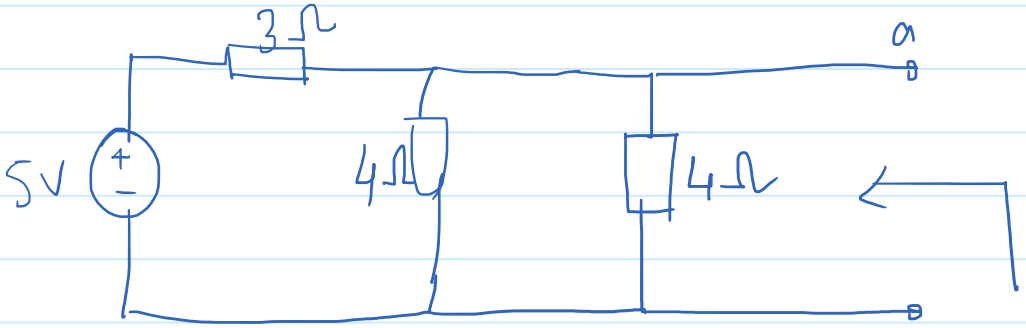




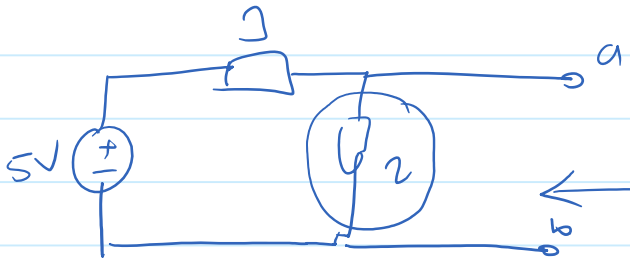
$$v_x = \frac{5}{2} \cdot 1.2 = \underline{\underline{3V}}$$

Answer : $v_x = 3$ V

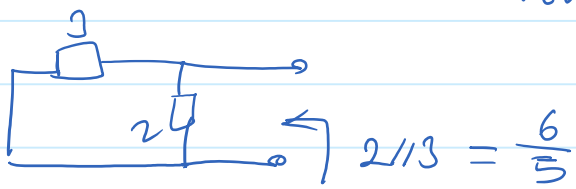
Q3

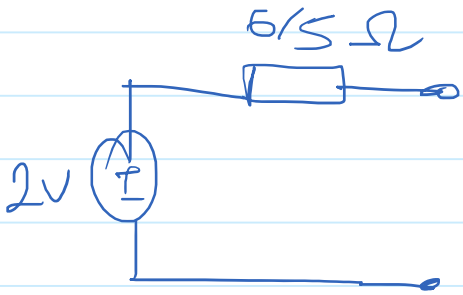


find the Thevenin Cirait

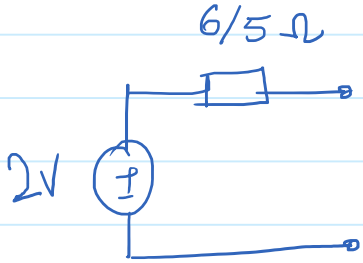


$V_{th} = \frac{5}{2+3} \cdot 2 = 2V$

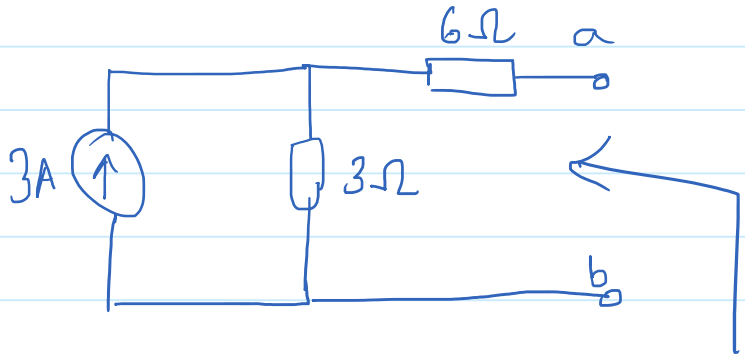




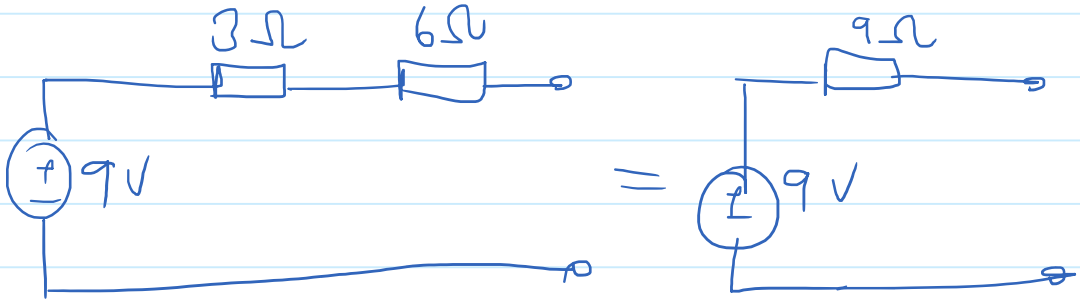
Answer:



Q4



Find the equvalent Northon Circuit



then