

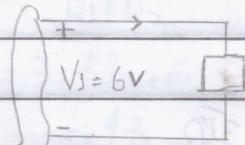
Duiz Edwards Colobos Krammer

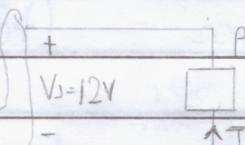
(88)

Circuitos elétricos]

APS]

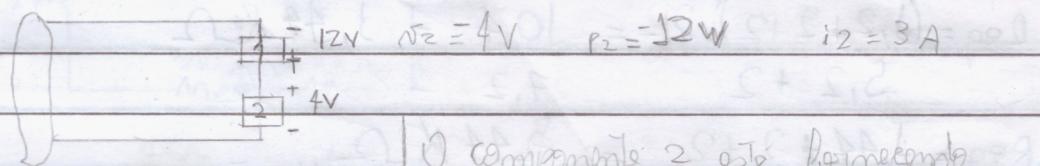
1.19)

a) 
 $P = 24W$ $P = \dot{V} \cdot i$ $i = \frac{P}{\dot{V}}$ $i = 24 \div 6 = 4A$
 $V = 6V$ $I = 4A$ $P = 24W$ (02.1)

b) 
 $P = \dot{V} \cdot i$ $P = -12 \cdot 2$ $P = -24W$
 $V = 12V$ $I = -2A$ $P = -24W$

1.26)

$\dot{V}_B = 12V$ $P_B = 36W$ $i_B = 3A$

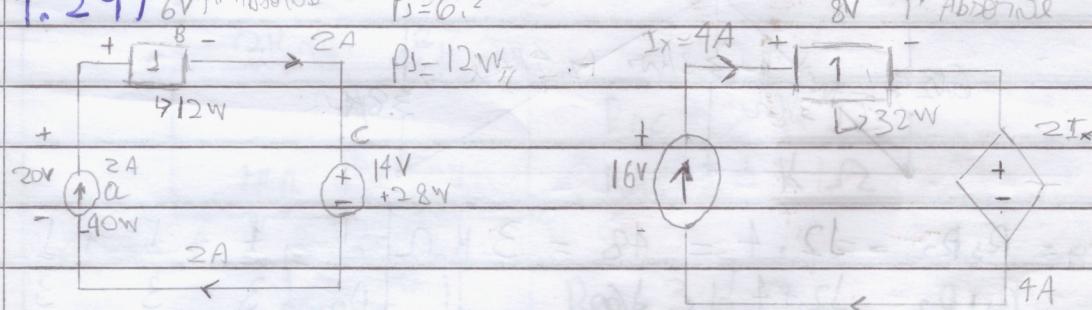


O componente 2 só fornece

$i = \frac{P}{\dot{V}}$ $i_B = 36 \div 12 = 3A$ Energia, pois o sentido de tensão é inverso ao componente 1.

$P = \dot{V} \cdot i$ $P_2 = -4 \cdot 3$ $P_2 = -12$ Potência de 12W. (12.1)

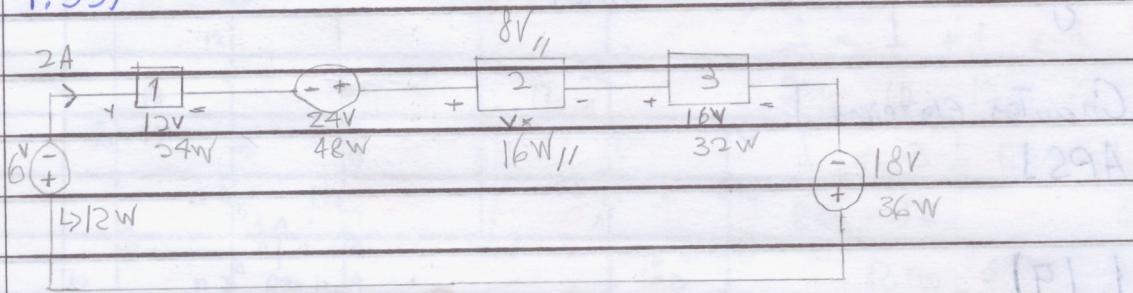
1.29) 6V \rightarrow Abastecimento $P_B = 6,2$



$-a + b + c = 0$ $P_B = 8,4$ $P_B = 32W$

$-20 + 6 + 14 = 0$

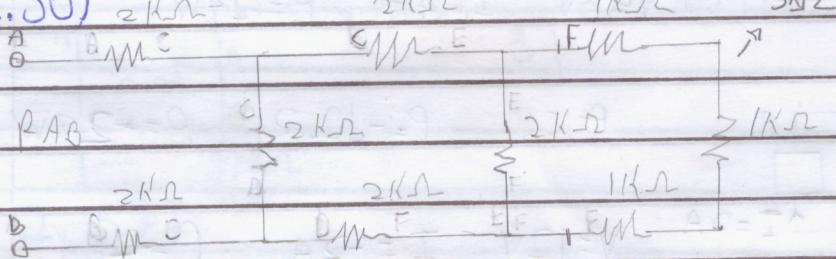
1.33)



$$+24W - 48W + V_{x,2} + 32W - 36W + 12W = 0$$

$$-16W + V_{x,2} = 0 \quad V_x = 8V_{\parallel}$$

2.50)



$$R_{eq} = R_1 R_2 = 3 \cdot 2 = 6 = 1,2 \Omega$$

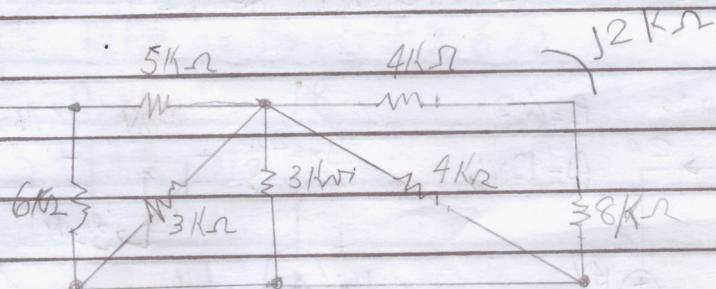
$$R_1 + R_2 = 5 = 5 \Omega$$

$$R_{eq} = (1,2 + 2 + 2) \cdot 2 = 10,4 = 1,44 \text{ k}\Omega$$

$$1,2 + 2 + 2 = 5,2 \text{ k}\Omega \parallel 7,2 \text{ k}\Omega$$

$$R_{eq} = 1,44 + 2 + 2 = 5,44 \text{ k}\Omega \parallel$$

2.51)

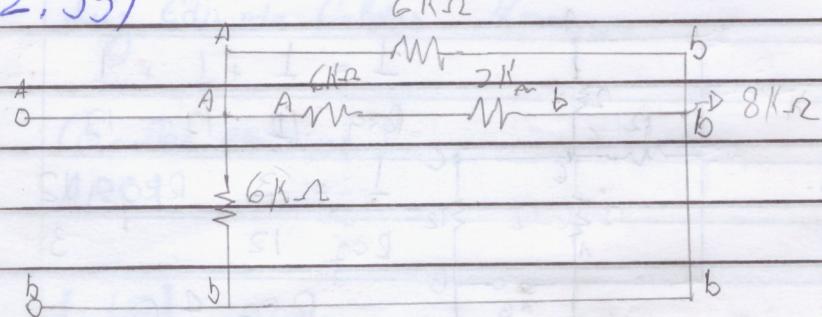


$$R_{eq} = R_1 R_2 = 12 \cdot 4 = 48 = 3 \text{ k}\Omega \quad \frac{1}{R} = \frac{1}{12} + \frac{1}{4} + \frac{1}{2}$$

$$R_1 + R_2 = 12 + 4 = 16 \quad \frac{1}{R_{eq}} = \frac{3}{16} \quad R_{eq} = 3 \cdot 16 = 48 \text{ k}\Omega$$

$$= 1 \text{ k}\Omega \quad | \quad 5 + 1 = 6 \text{ }\Omega \quad | \quad \frac{1}{R} = \frac{1}{6} + \frac{1}{6} = \frac{2}{6} = \frac{1}{3} \text{ k}\Omega$$

2.53)

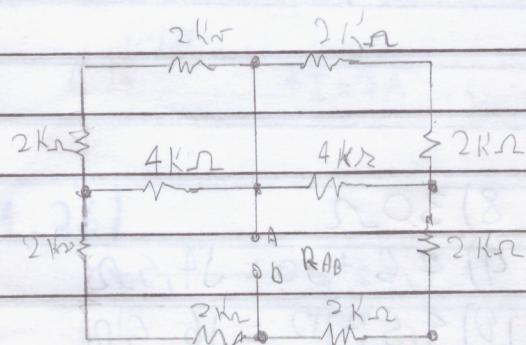


$$R_{eq} = \frac{R_1 R_2}{R_1 + R_2} = \frac{6 \cdot 8}{6 + 8} = \frac{48}{14} = 3,43\text{k}\Omega$$

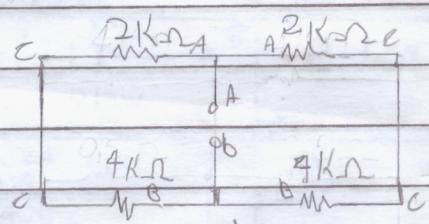
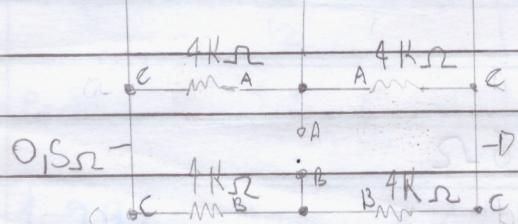
$$D_{eq} = 3,43 \cdot 6 = 20,58 = 2,058\text{k}\Omega$$

$\frac{9,43}{9,43}$

2.54)

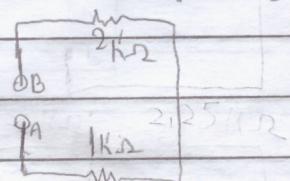


$$R_{AC} = \frac{16}{8} = 2\text{k}\Omega$$



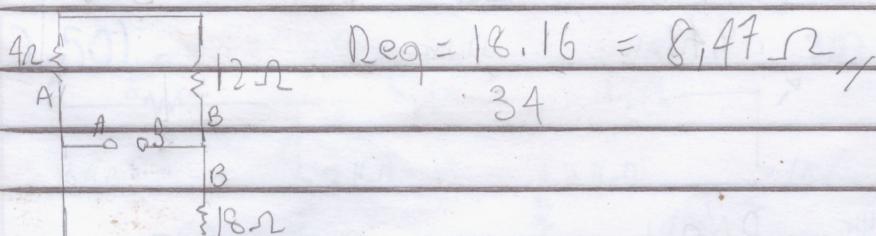
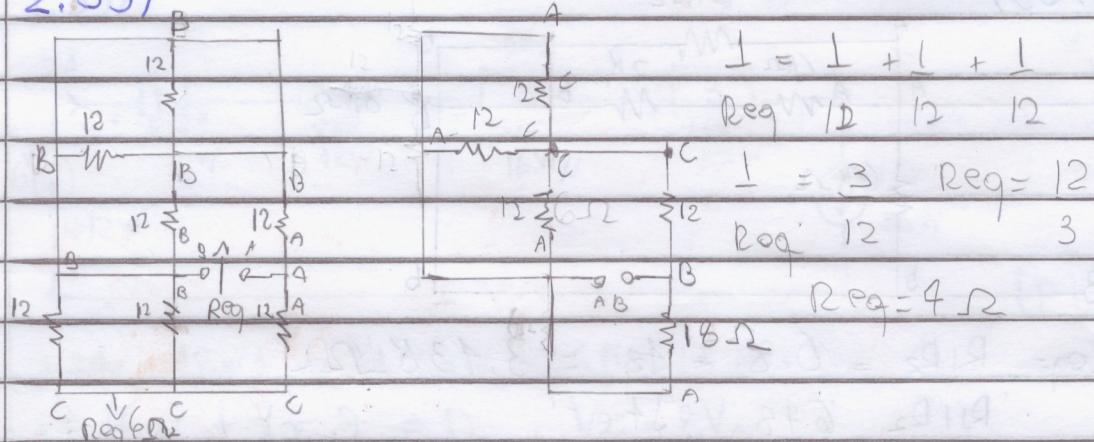
$$R_{BC} = 2\text{k}\Omega$$

$$R_{AC} = 1\text{k}\Omega$$

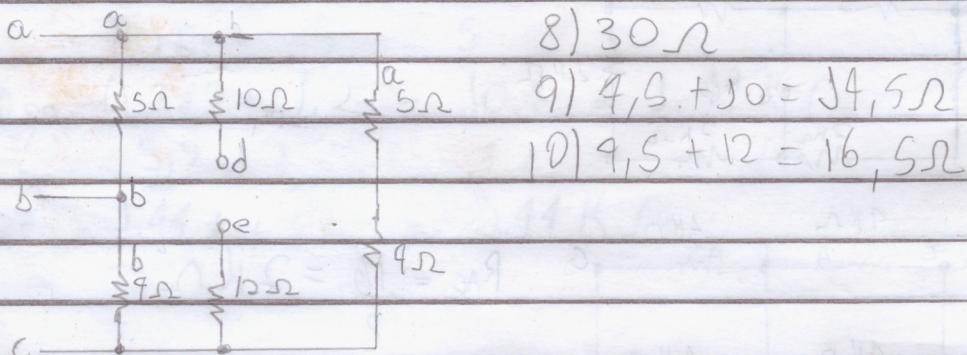


$$R_{eq} = 3\text{k}\Omega$$

2.55)



2.57)



$$1) \text{Req} = R_1 R_2 / (R_1 + R_2) = 13 \cdot 5 / (13 + 5) = 3,6 \Omega$$

$$R_1 + R_2 = 18$$

$$2) 5 + 5 + 4 + 4 = 18 \Omega$$

$$3) 18 \Omega$$

$$4) 10 + 9 \cdot 9 + 12 = 9,5 \Omega$$

$$5) 4,5 + 12 = 16,5 \Omega$$

$$6) 4,5 + 10 = 14,5 \Omega$$

$$7) 28 \Omega$$