1.1 $i = \frac{V}{R}$

1.2 $i = -\frac{V}{R}$

1.3 $i = \frac{V}{R} = \frac{6}{3} = 2A.$

1.4 $i = \frac{V}{R} = \frac{6}{3} = 2$

1.5 $V = V_0$

6 $V = V_0$

7 a) $V = \frac{R_L}{R_i + R_L} V_0.$

b) $V = \left(\frac{1}{\frac{R_i}{R_L} + 1} \right) V_0 = V_0$

1.8 $V_5 = -(V_1 + V_2) + (-V_5 + V_4) = -(6-4) + (-10-1) =$

$= -2 - 11 = -13V.$

1.9 a) 4,5V

b) -1,5V

10 a) $i_c = -1A + 2A - 4A = -3A$

b) $i_L = 1A + 4A - 3A + 2A = 4A$

c) $i_c = i_e = 1A + 5i_c - 3i_c + 3A = 4A + 2i_c \Rightarrow i_c = -4A.$

1.12. $P = 1.0 \cdot 10^3 W$

a) $i = \frac{P}{V} = \frac{1 \cdot 10^3}{230} = 4,34A.$

b) $R = \frac{V}{i} = \frac{230}{4,34} = 52,9 \approx 53 \Omega$

c) $5 \cdot \frac{365}{60} \cdot 1,80 \text{ kr}$

d)

1.14 Ingen i a och b blir spänningen över R_L ej avlyden

i c och d ligger en kortslutning parallellt med spänningskällan

1.15. $V_1 = -3V \quad V_2 = 5V \quad V_4 = 2V$

$V_3 = V_2 + V_1 - V_4 = 5V - 3V - 2V = 0V$

1.16. Potențial în nod 1 = 0.

Nod 3: $5 - (-3) = 8V$.

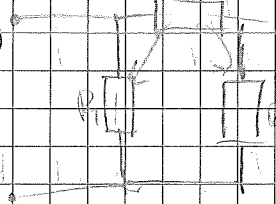
1.17 $\begin{cases} i_1 = 5\,mA \\ i_2 = 15\,mA \\ i_3 = 7\,mA \\ i_4 = 10\,mA \end{cases}$ $\quad i_1 + i_2 - i_3 - i_4 - i_5 = 0$

$\Rightarrow i_5 = -i_1 - i_3 - i_4 + i_2$

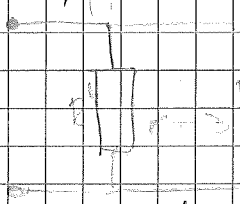
$= -5 - 15 + 7 - 10 = -23\,mA$.

1.19. $P = V_0 \cdot i \Rightarrow R = \frac{V}{i} \Rightarrow i = \frac{V}{R}$

$\Rightarrow P = V_0 \cdot \frac{V_0}{R} = \frac{V_0^2}{R}$

2.8. a) 1) 

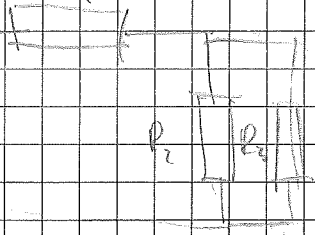
$R' = R_1 + R_2$

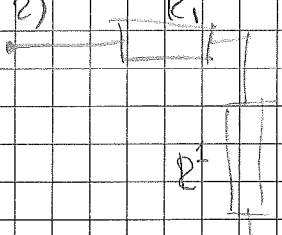
2) 

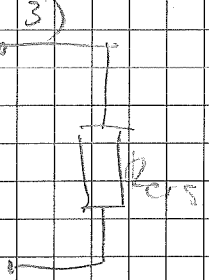
$R' = \frac{R_2 R_3}{R_2 + R_3}$

3) 

$R_{ech} = \frac{R' R_3}{R' + R_3} = \frac{(R_1 + R_2) R_3}{R_1 + R_2 + R_3}$

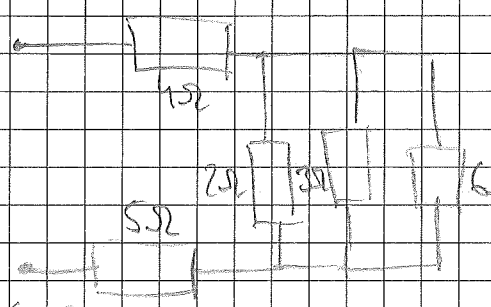
b) 1) 

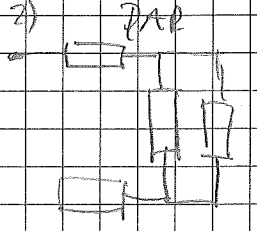
2) 

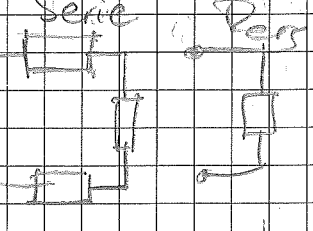
3) 

$R' = \frac{R_2 R_3}{R_2 + R_3}$

$R_{ech} = R_1 + \frac{R_2 R_3}{R_2 + R_3}$

c) 1) 

2) 

3) 

1) $R' = \frac{6 \cdot 3}{6+3} = \frac{18}{9} = 2\,\Omega$

2) $R = \frac{2 \cdot 2}{2+2} = 1\,\Omega$.

3) $R_{ech} = 4\,\Omega + 5\,\Omega + 1\,\Omega = 10\,\Omega$

4)