

Velg  $R_1$  "like"  
 $R_s |_{-40^\circ C} = 843 \Omega$

Regn ut  $U_1$  ved  $-40^\circ C$

$$I = \frac{+5,0 [V]}{R_1 + R_s}$$

$$U_1 = I \cdot R_s = \frac{5,0}{843 + 843} \cdot 843 = 2,5 V$$

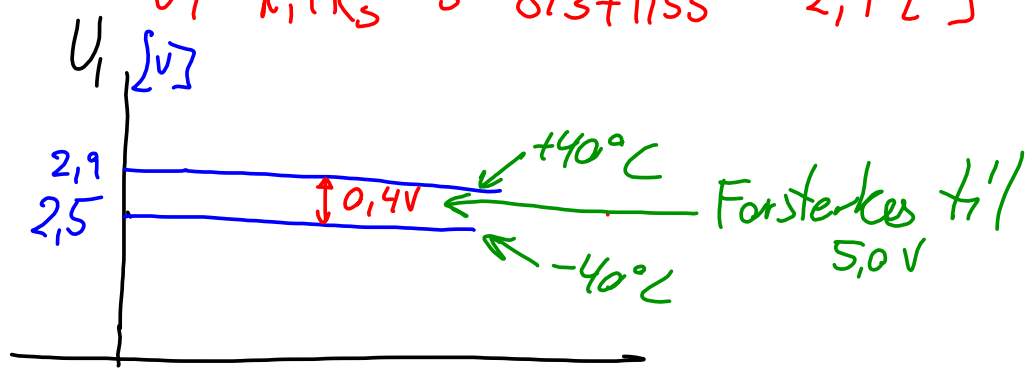
$R_s \Rightarrow Pt 1000$

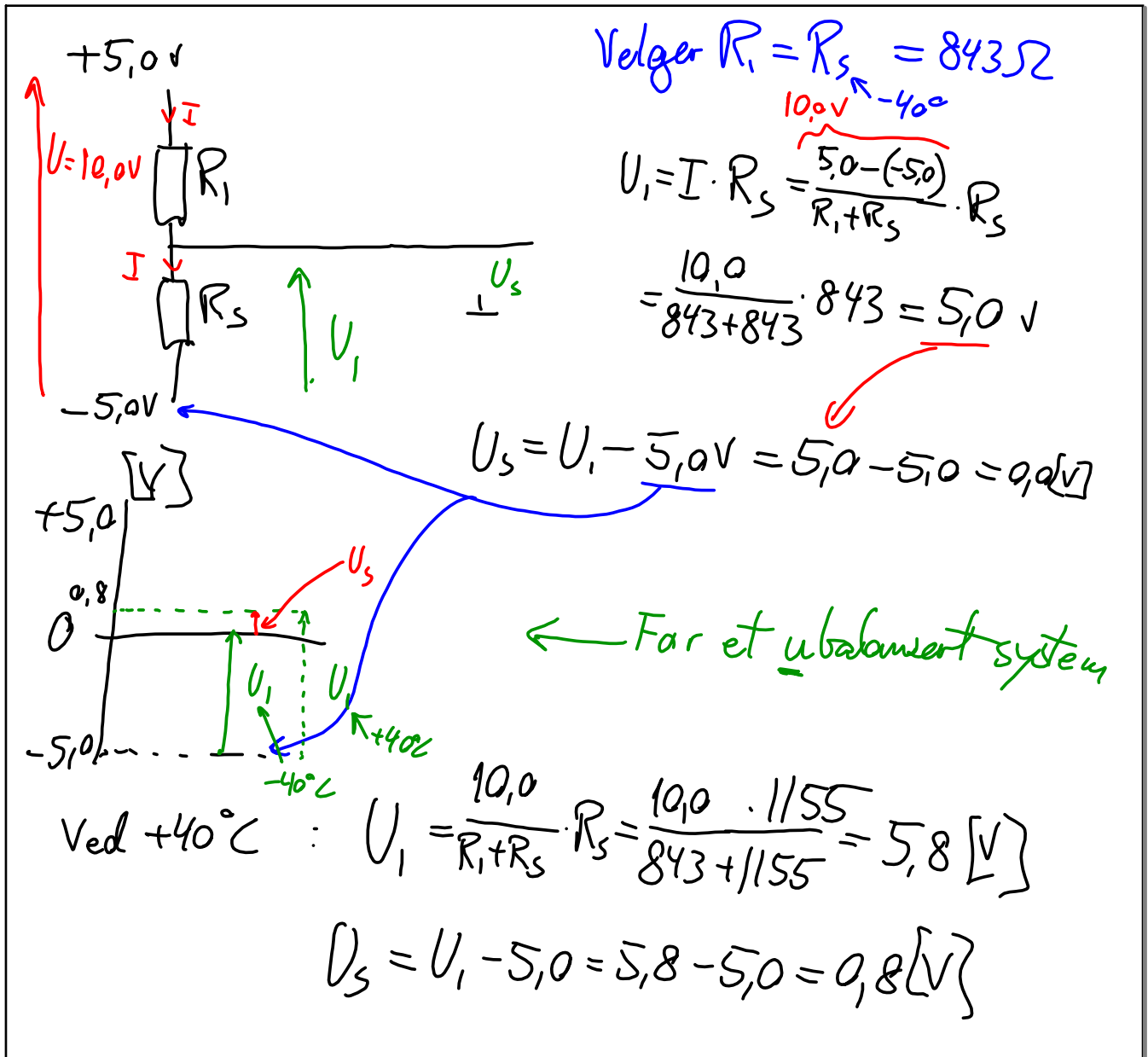
$-40^\circ C : R_s = 842,70 \Omega \rightarrow 843$

$+40^\circ C : R_s = 1155,40 \Omega$

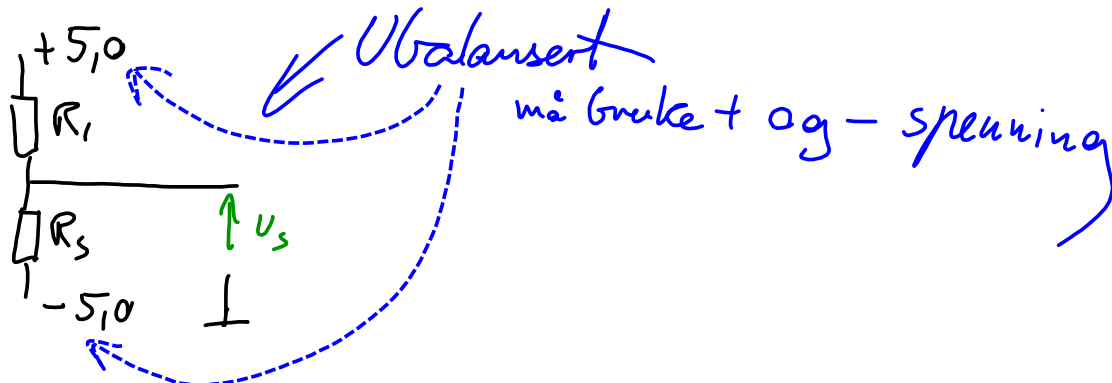
Regn ut  $U_1$  ved  $+40^\circ C$

$$U_1 = \frac{5,0}{R_1 + R_s} \cdot R_s = \frac{5,0 \cdot 1155}{843 + 1155} = 2,9 [V]$$

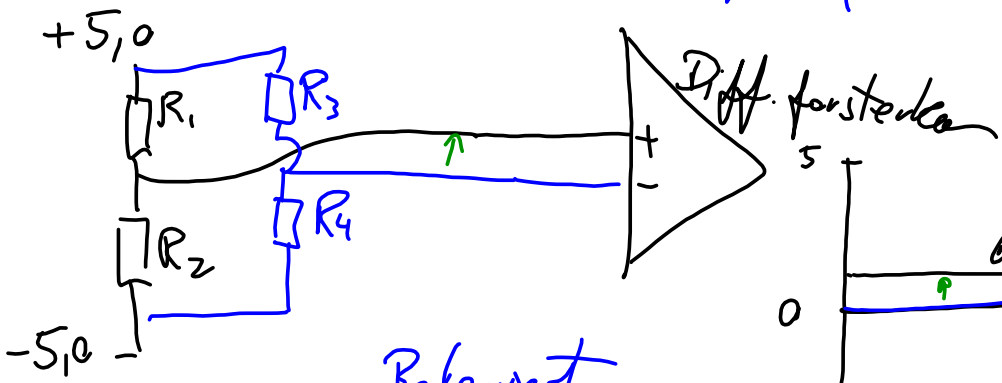




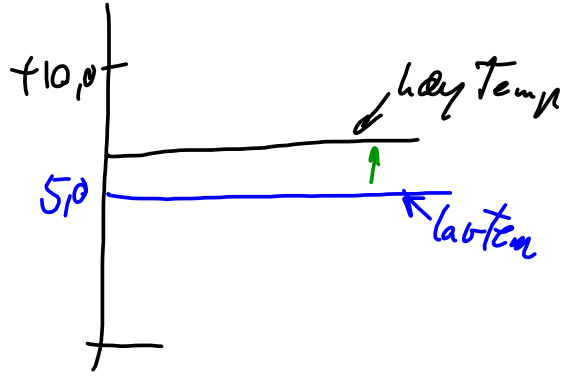
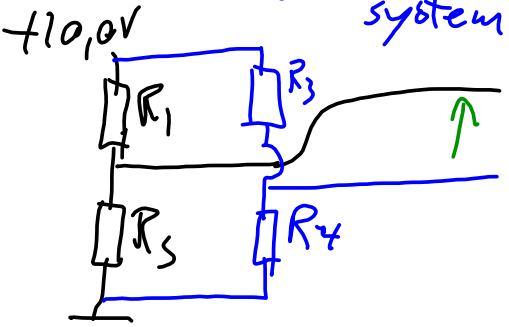




Balansert system



Balansert system



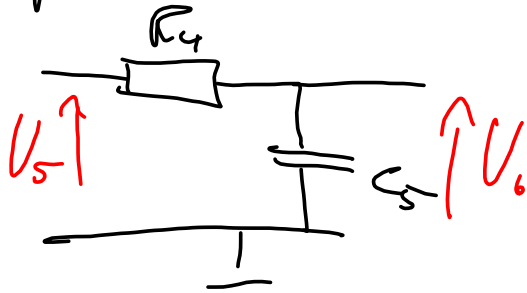
Regner ut forsterkningen i  
differensialforsterkeren AMP02

Vi må ha en forsterkning på

$$\frac{50}{0,8} = 6,25 = 6,3 \text{ ganger}$$

$$R_G = \frac{50 \text{ K}\Omega}{5,3} = \underline{9,4 \text{ K}\Omega}$$

LP-filter



$$f_g = \frac{1}{2\pi C_5 R_4} = 100 \text{ [Hz]}$$

$$R_4 = \frac{1}{2\pi C_5 \cdot 100} = \frac{1}{628 \cdot 1,0 \cdot 10^{-9}} = \frac{10^9}{628} =$$

*høyeste frekvens i signalet*  
*10 Hz*  
*10 · f<sub>s</sub>*  
*Verdier til dette*  
*For høy R<sub>4</sub>*  
*↑ Velges*  
*↑ nano*

$$R_4 = \frac{1}{628 \cdot 1,0 \cdot 10^{-6}} = \frac{10^6}{628} = \underline{1592 \Omega}$$

*↑ N*