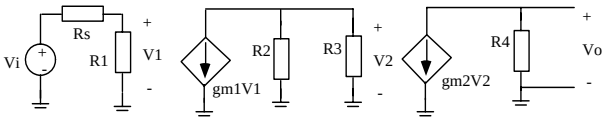
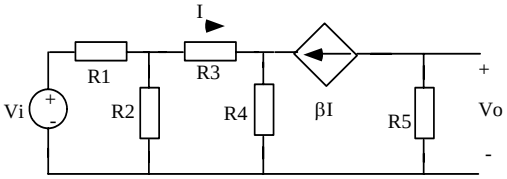
TEORIA DE CIRCUITS
2on Curs de Física
FULL DE PROBLEMES 3.

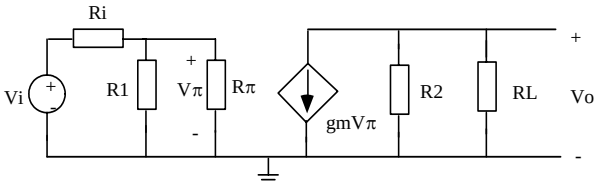
1. Determinau Vo en els circuits següents :



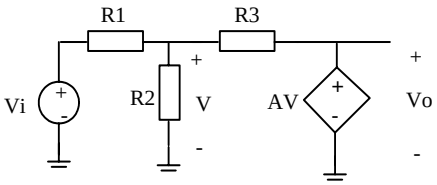
R_S=0.5 kΩ; R_1=R_2=R_3=39kΩ; R_4=10kΩ;
g_{m1}=g_{m2}=0.01 Ω $^{-1}$



R_1= 0.5 kΩ; R_2= R_3=R_4 = 28 kΩ; R_5= 10kΩ; β = 150

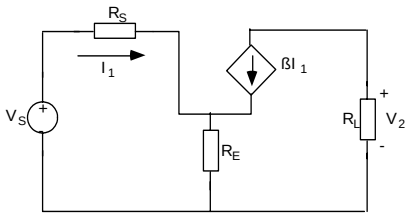


R_1=28 kΩ; R_L=10kΩ; $R_π$=25kΩ; R_2=39kΩ;
R_i=10kΩ; g_m=5 10^{-3} Ω $^{-1}$



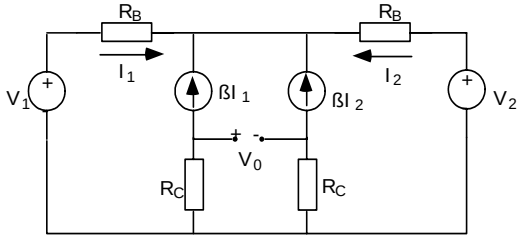
R_2=100kΩ; R_3=60kΩ; R_1=10kΩ;
A=1000

2. Determinau el guany de tensió V_2/Vs en el circuit.

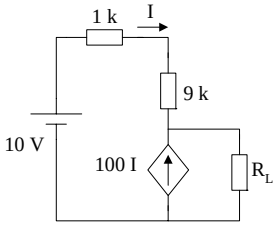


3. Calculau Vo al circuit.

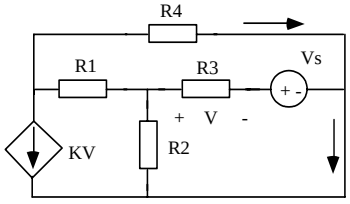
β=50; R_B=1kΩ; R_C=5kΩ; V_1=1V; V_2=2 V



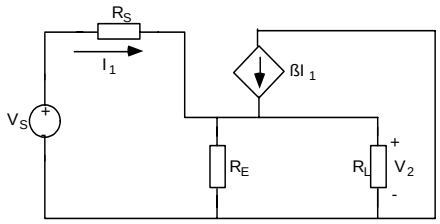
4. Que ha de valer R_L si volem que I = 100 μA ?



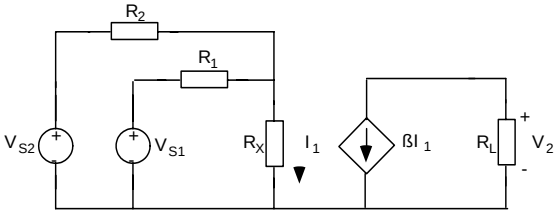
5. Determinau els corrents que atravessen R4 i la branca dreta del circuit de la figura.



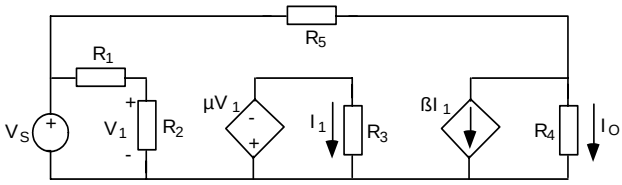
6.- Determinau el guany de tensió V_2/Vs per el circuit següent.



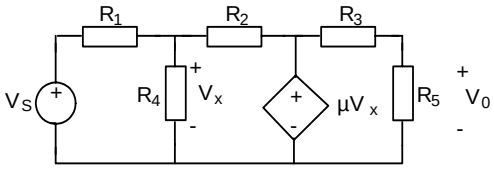
7. Demostrau que $V_2=b(K_1V_{S1}+K_2V_{S2})$ al circuit següent. Determinau K_1 i K_2.



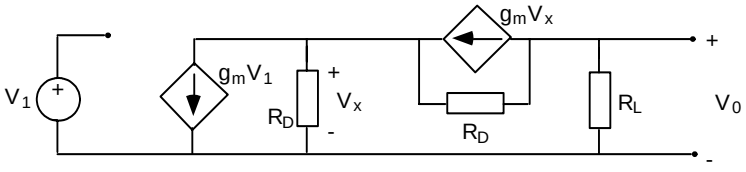
8. Calculau I_0 en el circuit R1=1kΩ; R2=2kΩ; R3=3kΩ; R4=4kΩ; Vs=1V; K=5.



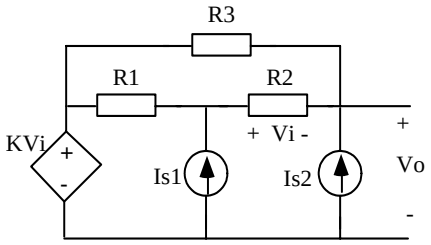
9. Calculau V_0 en el circuit



10. Calculau V_0 en el circuit

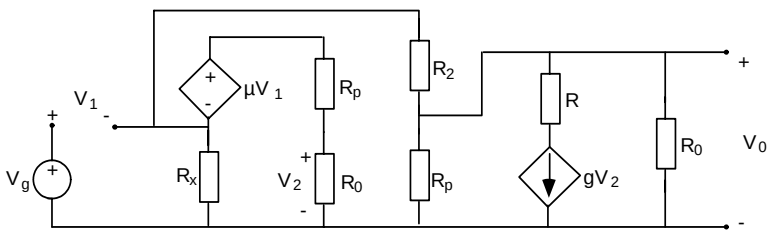


11. Calculau el valor de Vo en el circuit de la figura
a) Expressió analítica.
b) Emprant les dades :
R1=10kΩ; R2=2kΩ; R3=3kΩ; K=5; Is1=1mA; Is2=2mA.

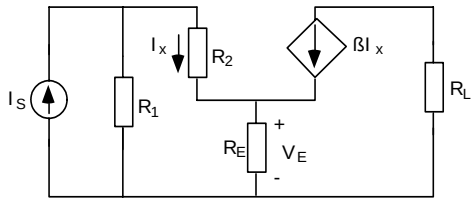


12. Calculau V_0/V_g en el circuit, emprant els valors següents:

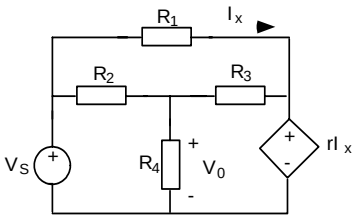
Rx = Rp = 5 kΩ Ro = 10 kΩ R2 = R = 38kΩ μ = 5000 g= 10^{-2} Ω^{-1}



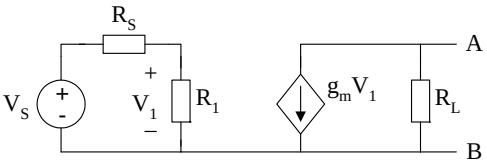
13. Calculau V_E en el circuit



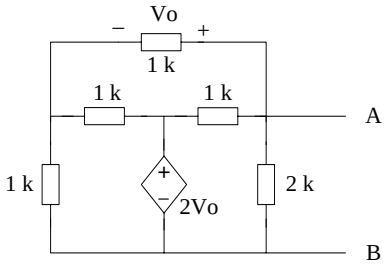
14. Calculau V_0 en el circuit



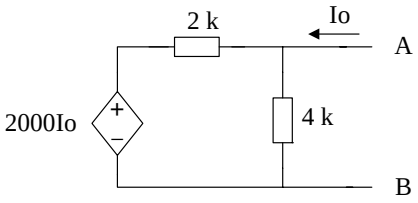
15. Calculau l'equivalent Thevenin del circuit de la figura.



16. Determinau el circuit equivalent de Thevenin entre A i B



17. Determinau l'equivalent de Thevenin del circuit entre els punts A i B.



18. Calcular Vo trobant primer l'equivalent de Thevenin entre A i B