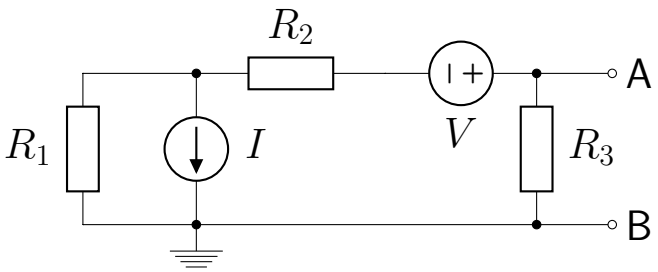
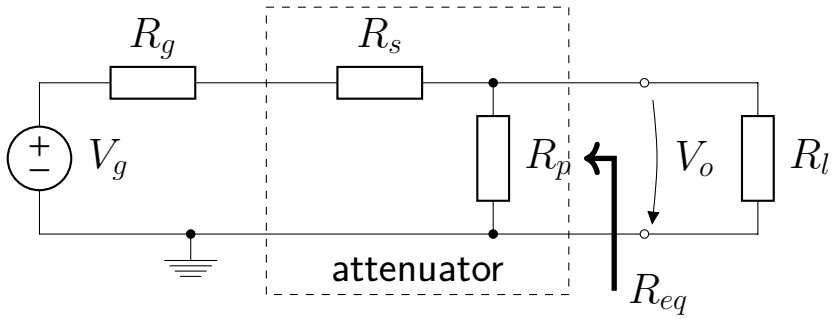
Seminars - 5th week

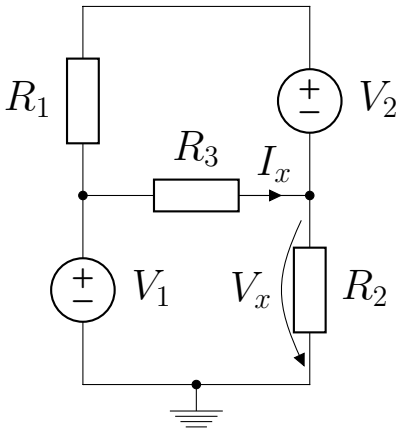
1. For the circuit in the figure below find its Thevenin equivalent circuit seen at terminals A-B. V = 16 V, I = 32 mA, R_1 = 1 kΩ, R_2 = 4 kΩ, R_3 = 3 kΩ.



2. An attenuator is an interface circuit that reduces the voltage level without changing the output resistance (it is important, if we connect e.g. coaxial cable to the output of generator).
   a) Find values of R_s and R_p to meet tge following requirements: $\frac{V_O}{V_g}$ = 0.125 and $R_{eq} = R_g$ = 100 Ω.
   b) Using the attenuator designed in previous step find current through a load of R_l = 50 Ω, if V_g = 24 V.



3. For the circuit in the figure calculate voltage V_x and current I_x. V_1 = 40 V, V_2 = 32 V, R_1 = 2 kΩ, R_2 = 3 kΩ, R_3 = 2 kΩ.



4. For the circuit in the figure calculate voltage V_x and current I_x. V = 50 V, I = 10 mA, R_1 = 1 kΩ, R_2 = 2 kΩ, R_3 = 3 kΩ.