

$$V_T = 0,0258649 \text{ V}$$

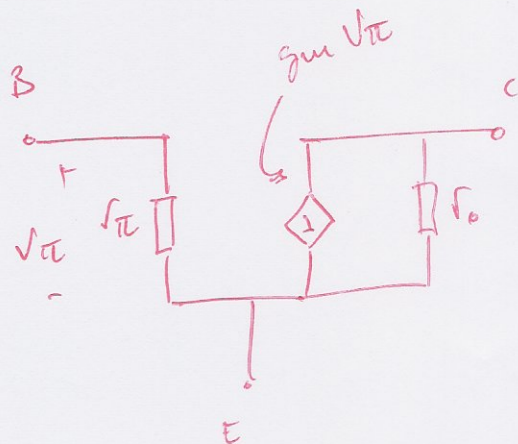
→ Resp (cont.)

② Calcular os parâmetros do modelo equivalente linear.

$$g_m = \frac{I_C}{V_T} = \frac{198,8 \mu\text{A}}{0,025} = 0,767325$$

$$r_{\pi} = \frac{V_T}{I_B} = \frac{0,0258649}{198,5 \mu\text{A}} = 130,3 \Omega$$

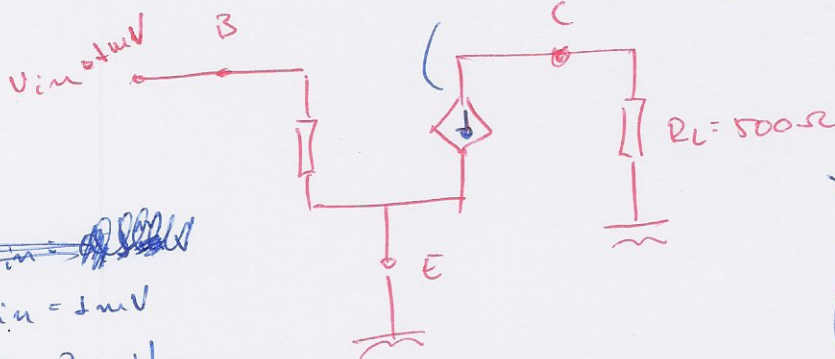
$$r_o \approx \frac{V_A}{I_C} = \infty$$



③ → Analise DC

e calcular o comportamento do circuito linear

signal negativo
polaridade
da fonte de corrente.



~~$$v_{in} = v_{in} = 1 \text{ mV}$$~~

$$v_{\pi} = v_{in} = 1 \text{ mV}$$

$$v_{out} = -g_m R_L \cdot v_{\pi}$$

$$-g_m R_L \cdot v_{in}$$

$$-0,767 \times 500 \times 0,001 \Rightarrow \boxed{v_{out} \approx -383,7 \text{ mV}}$$

$$i_{in} = \frac{v_{in}}{r_{\pi}}$$

$$i_{in} = \frac{0,001}{130,3} \approx 7,675 \mu\text{A}$$