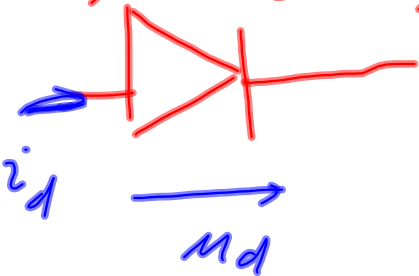


2016 IELe 10. 11. 2016

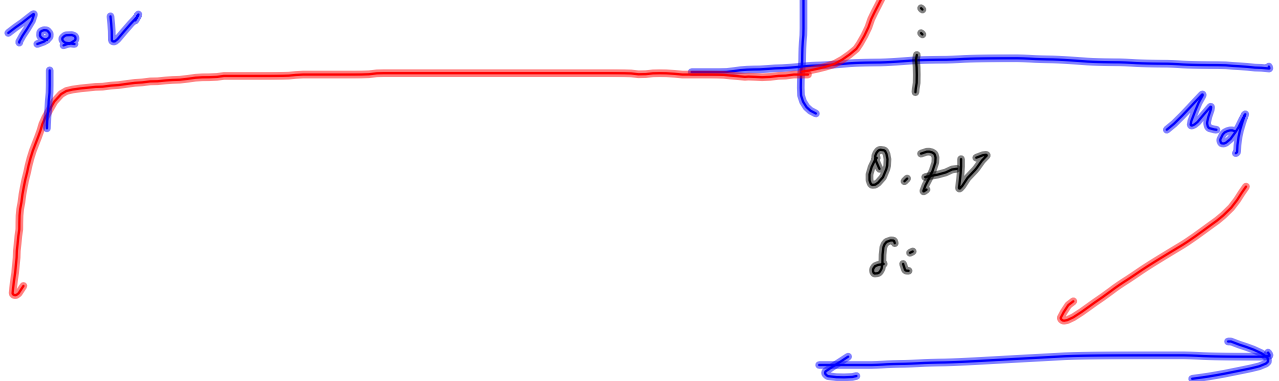
10⁰P

1107E

ANODE CATHODE

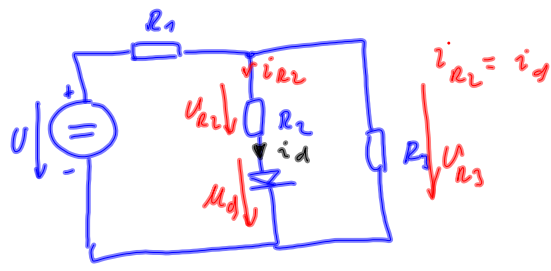


POSITIVE
DIRECTION



$$i_d = a \left(e^{b u_d} - 1 \right)$$

a, b ... CONSTANTS



Find R_1 so THAT $M_d = 0.7V$
 $U = 15V, R_2 = 1k\Omega, R_3 = 500\Omega$

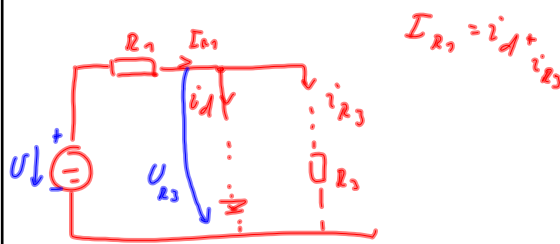
$$i_d = \underline{a} \left(e^{\frac{1}{a} M_d} - 1 \right)$$

$\Rightarrow i_d \Rightarrow (0.01A)$ FOR EXAMPLE

$$U_{R2} = R_2 \cdot i_d$$

$$U_{R3} = U_{R2} + M_d$$

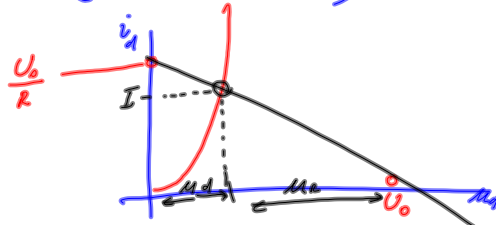
$$i_{R3} = \frac{U_{R3}}{R_3}$$

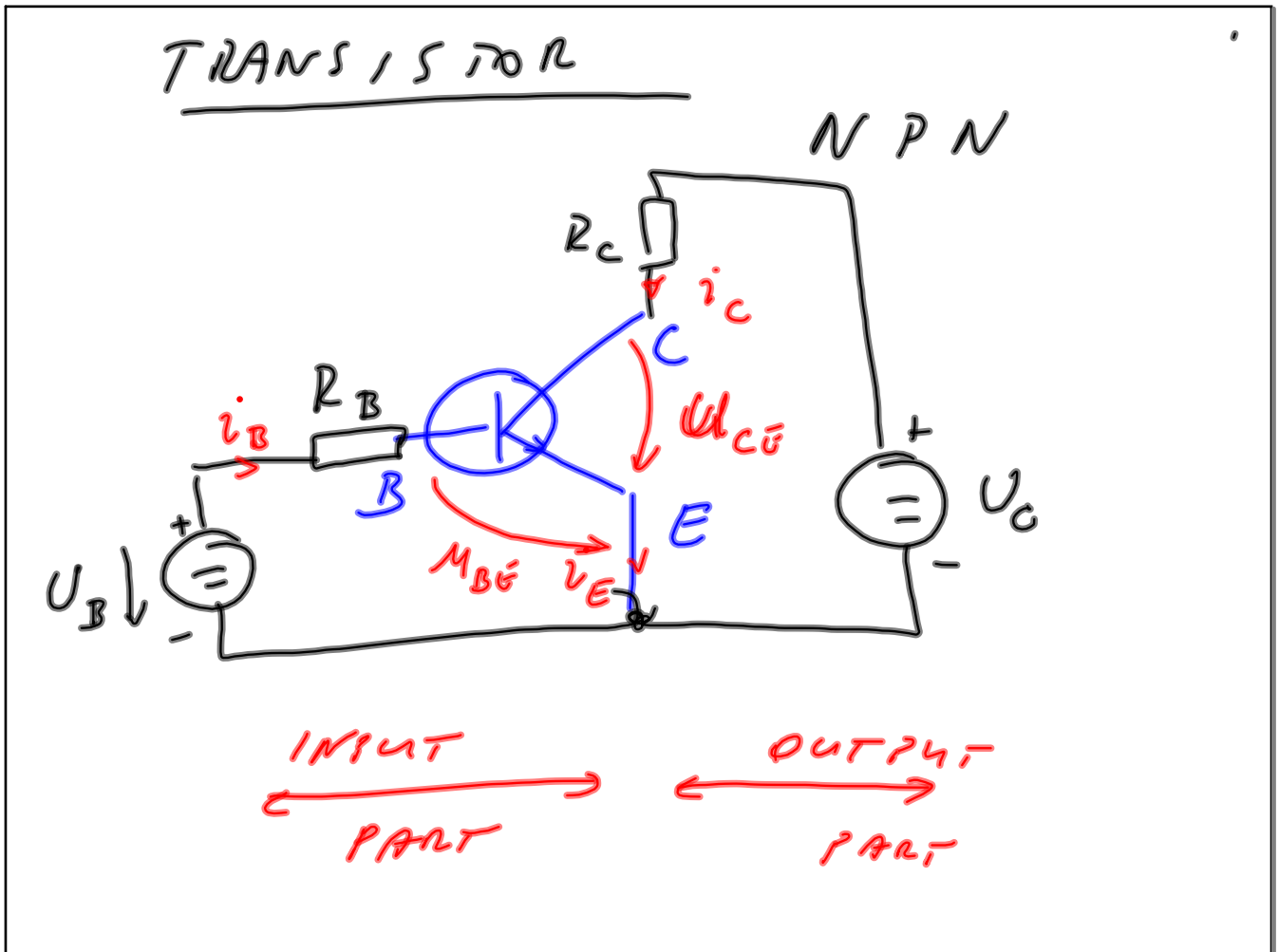


$$R_1 \cdot I_{R1} + U_{R3} - U = 0$$

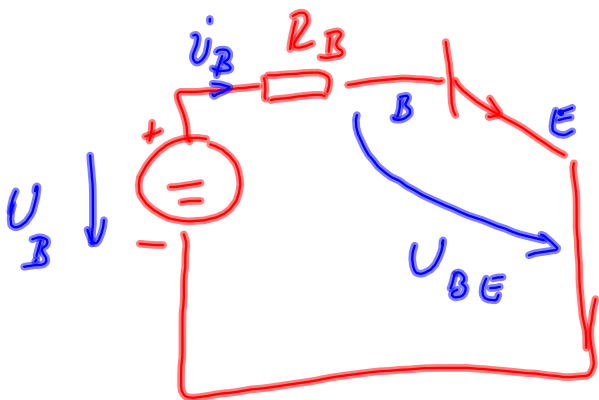
$$R_1 = \frac{U - U_{R3}}{I_{R3}}$$

GRAPHICAL METHOD

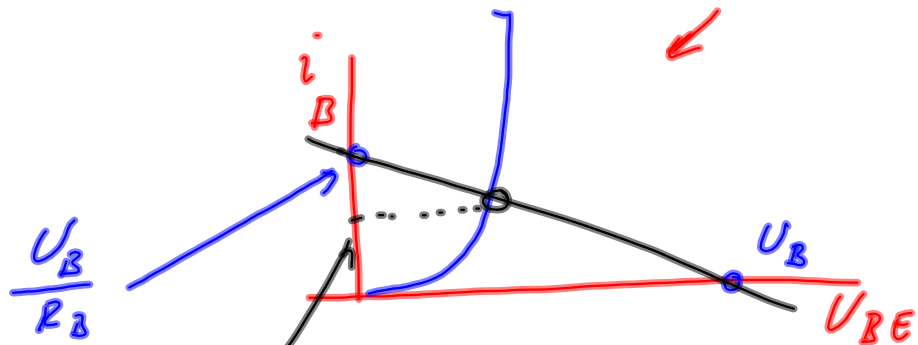
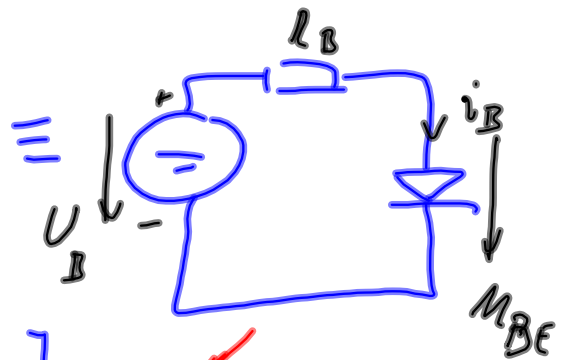




INPUT PART



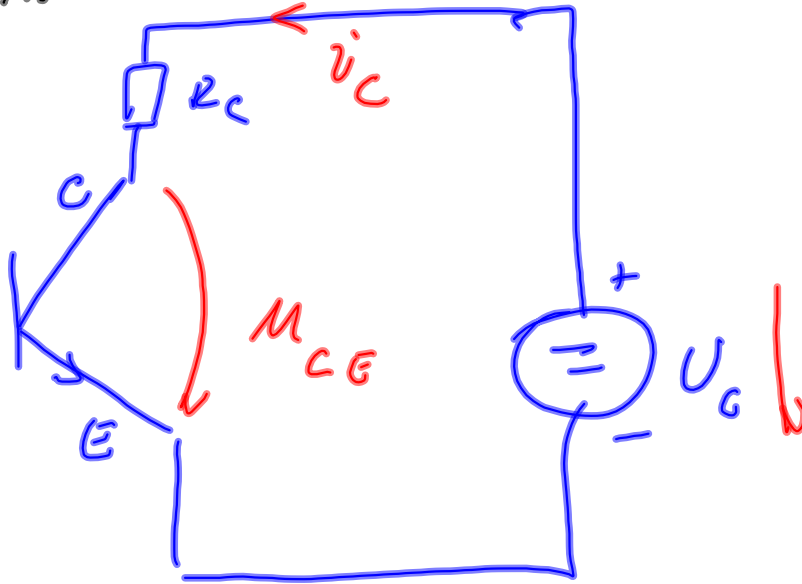
GRAPHICAL NOISE



$i_{B1} = 20 \mu A$ FOR EXAMPLE

OUTPUT

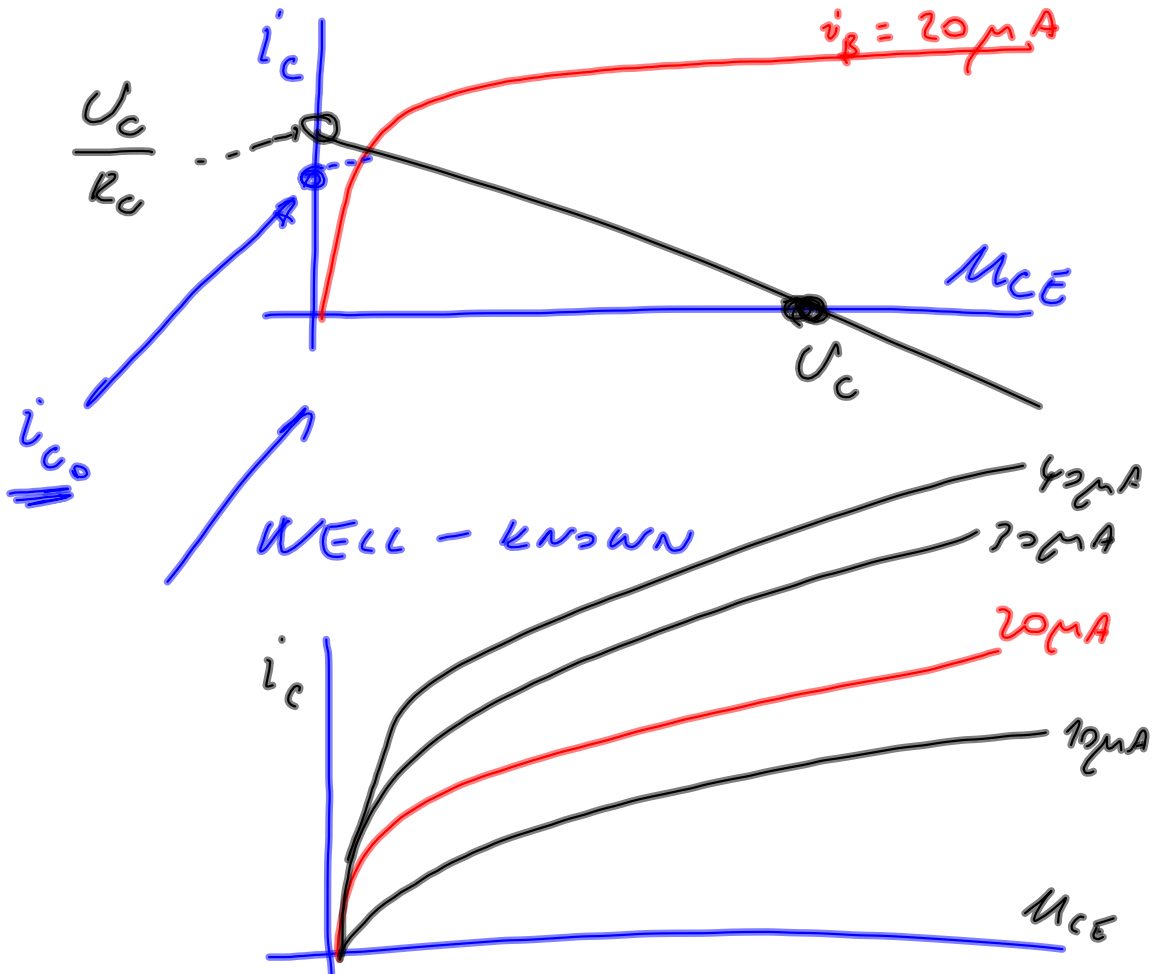
PART



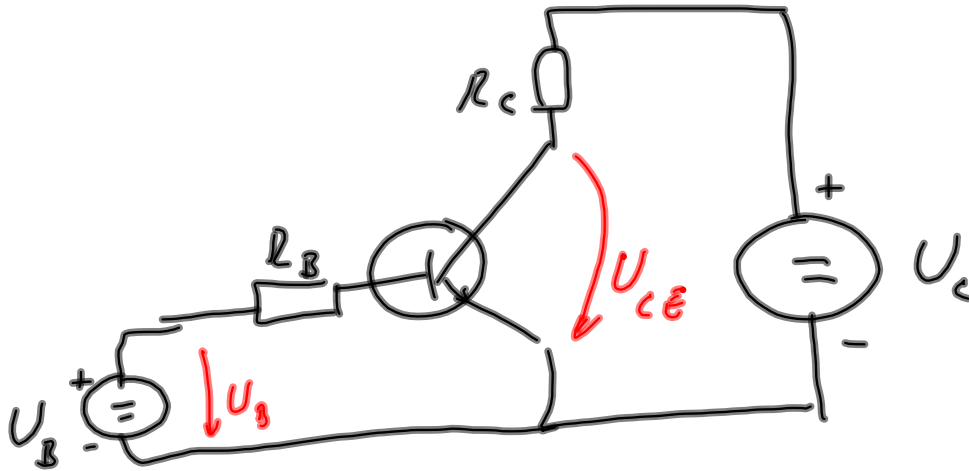
EXAM

~~16 WEDNESDAY~~ ~~FRIDAY~~

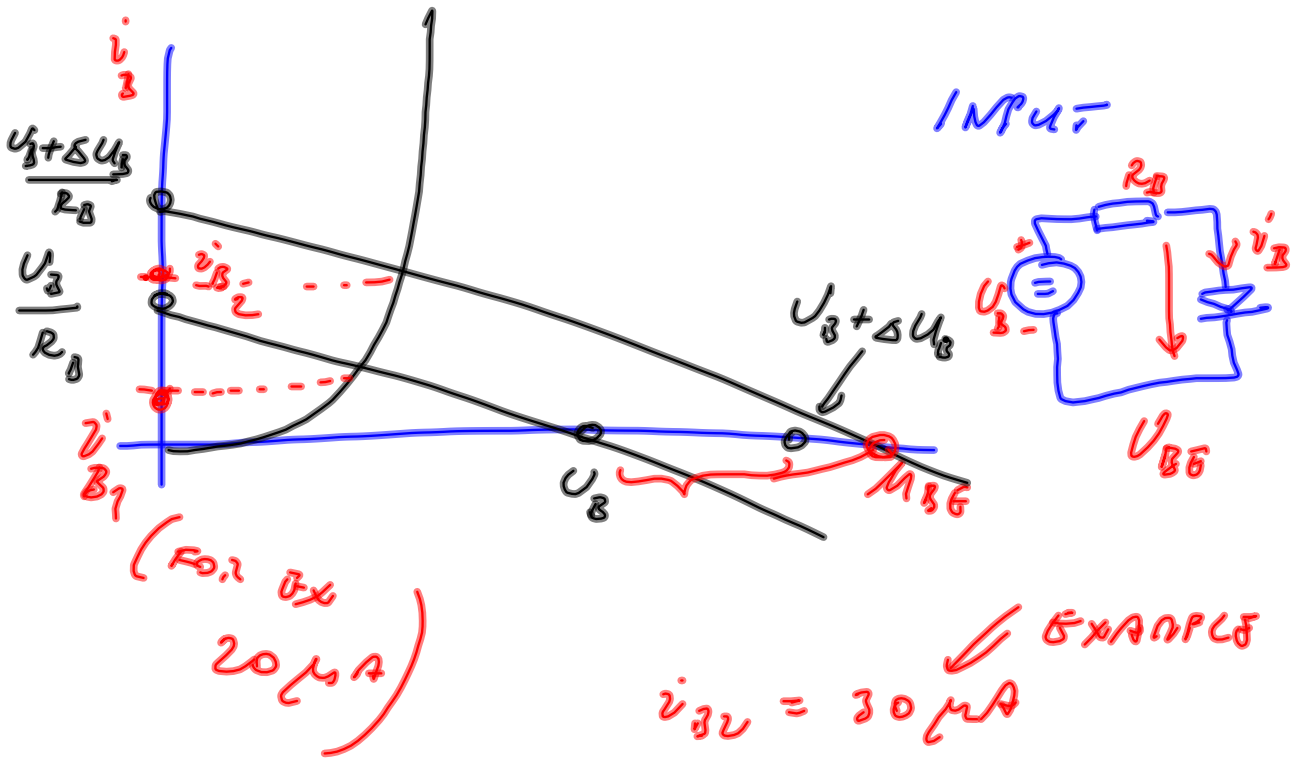
15 THURSDAY

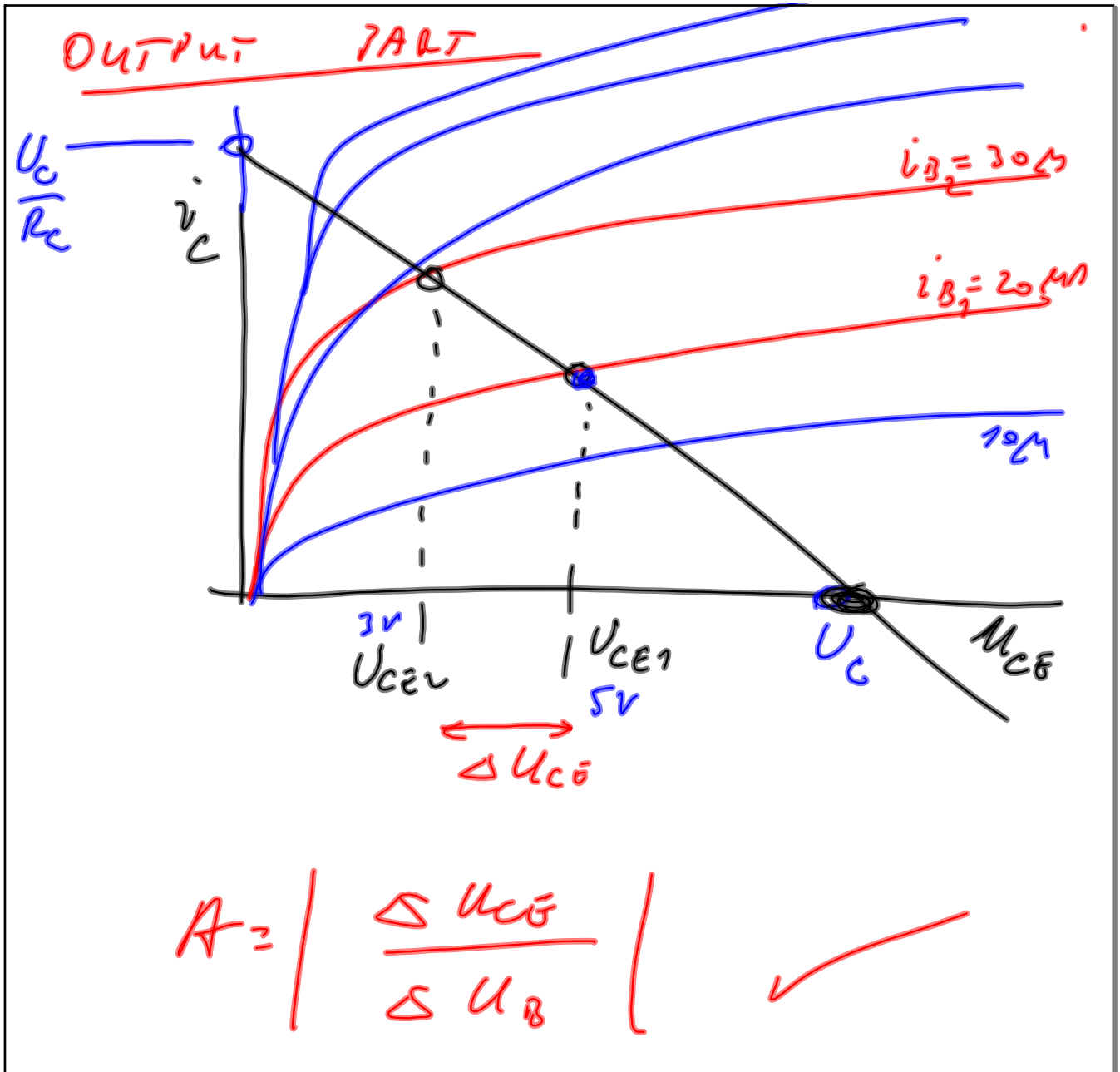


GAIN A OF TRANSISTOR AMPLIFIER

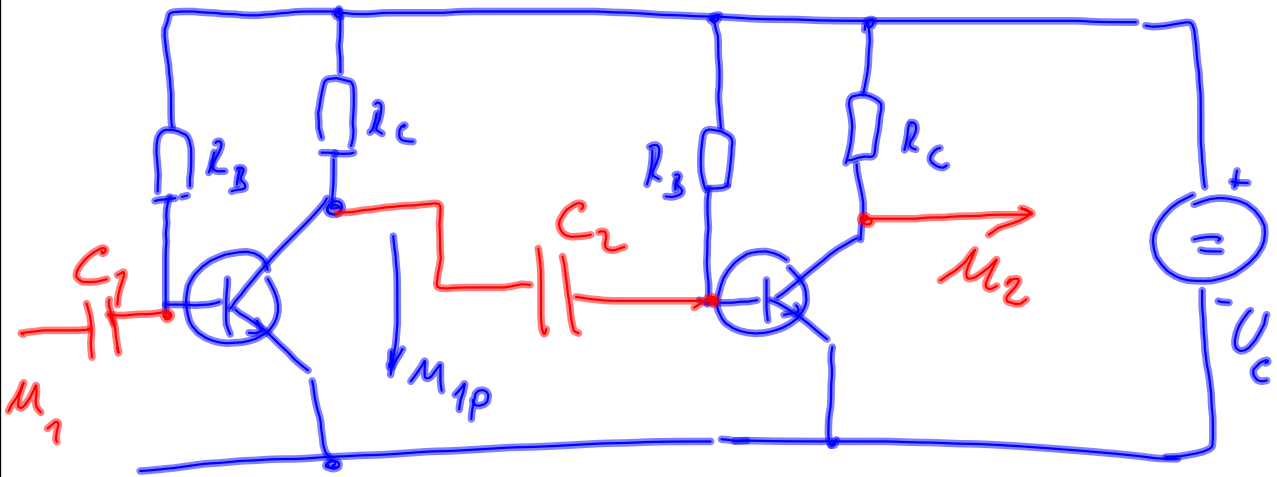


$$A = \left| \frac{\Delta U_{CE}}{\Delta U_B} \right|$$





TWO - TRANSISTOR AMPLIFIER



GAIN $A_M = \frac{\Delta U_2}{\Delta U_1}$ ↑ VOLTAGE

