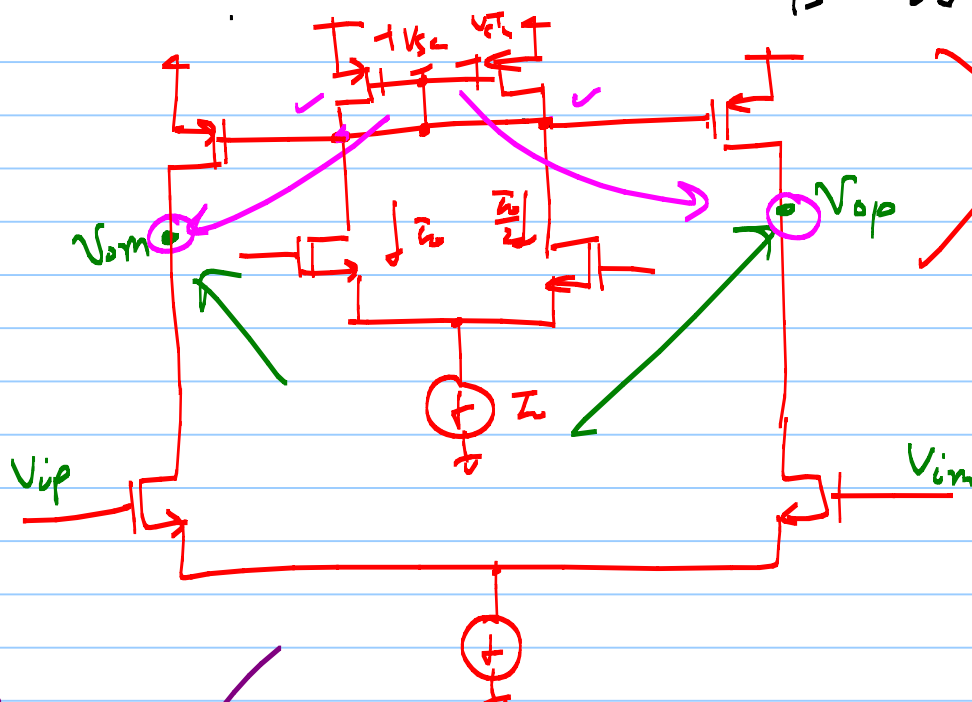
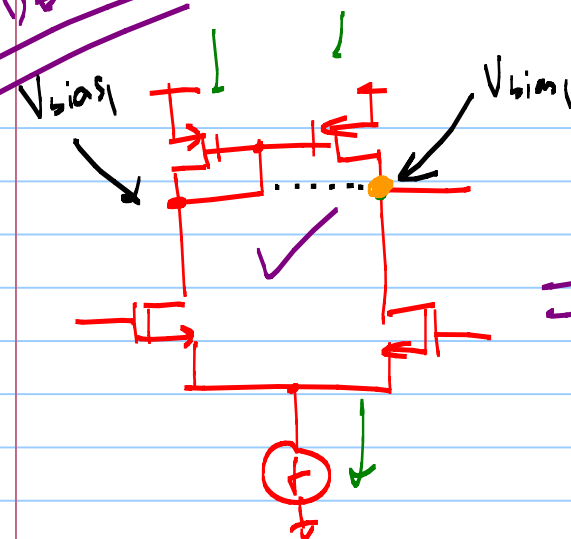


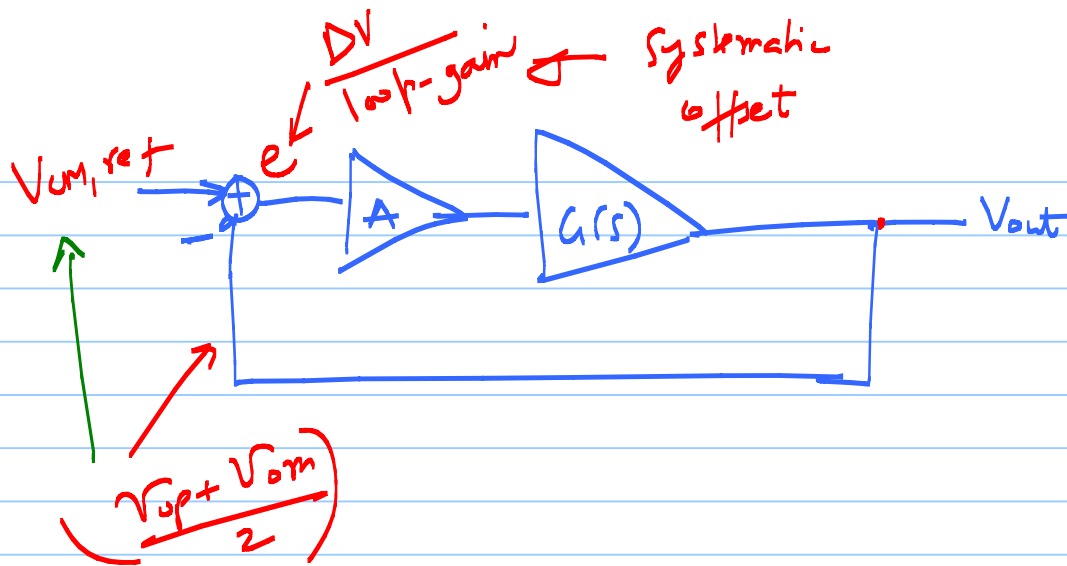
Asio6



"Symmetry"

output CM-level is defined

SYMMETRY $\neq$ CMFB

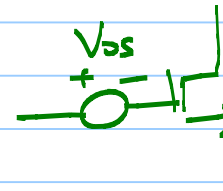


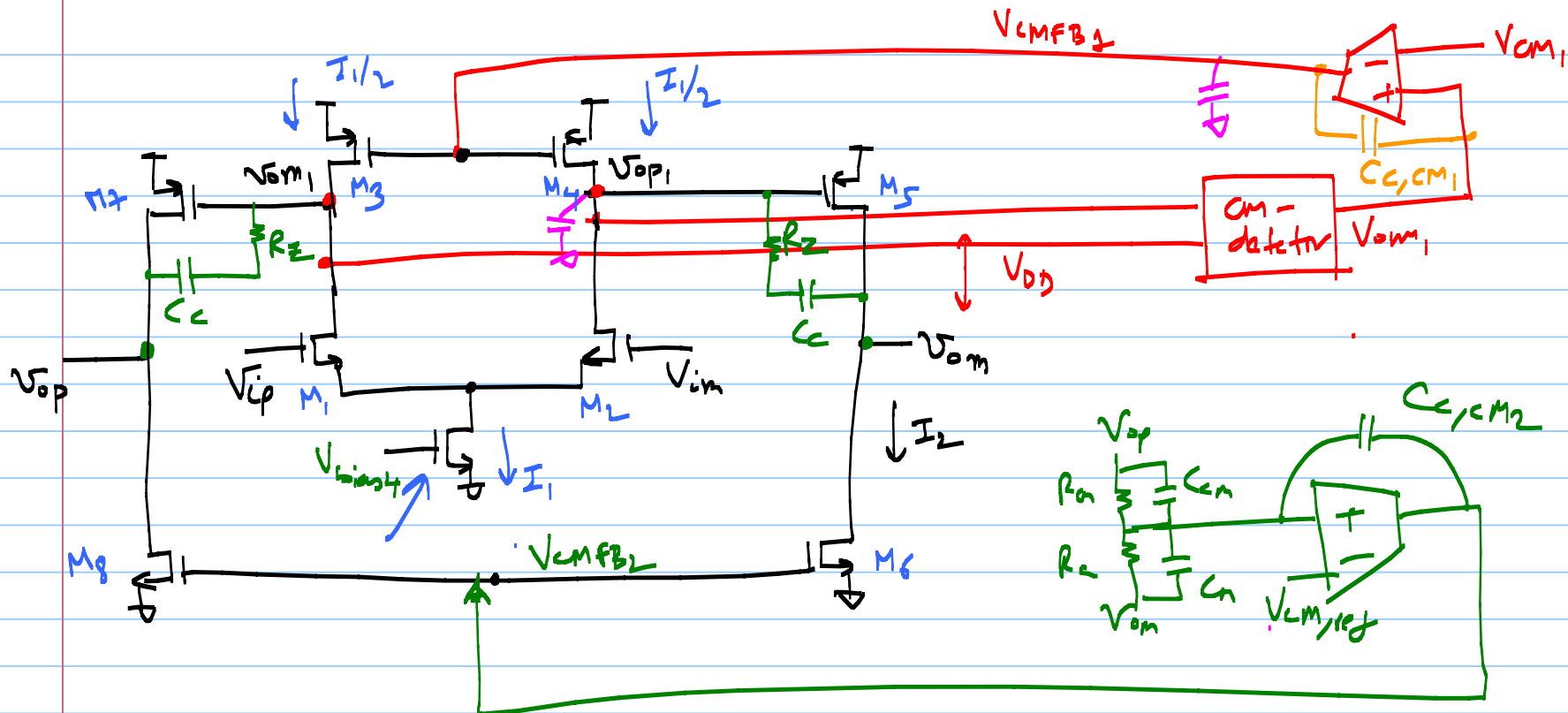
$$V_{cmFB} - V_{SG_{3,4}}$$

ΔV

$V_{SG_{M_{3c}, M_{4c}}}$

0



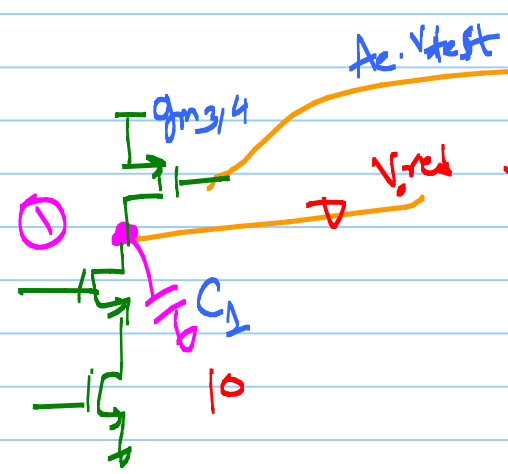


CMFB: Adequate $PM \geq 45^\circ$,

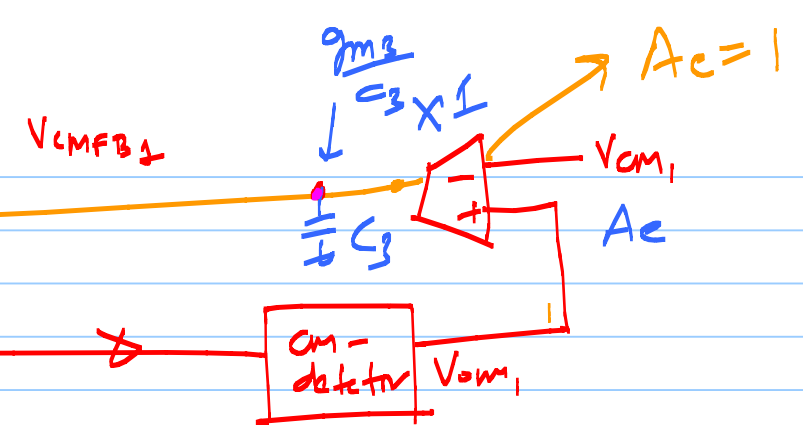
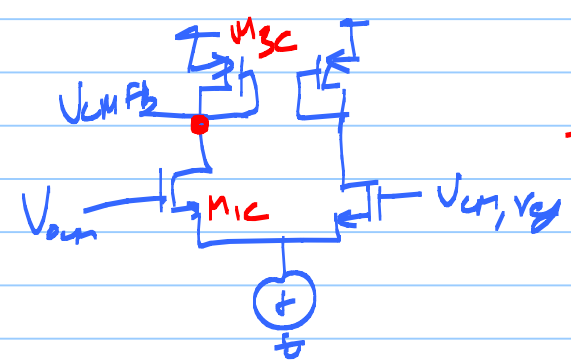
$$\underbrace{\omega_{u, CMFB}}_{CMFB \text{ loop}} \geq \omega_{u, opamp}$$

CM picture

$PM \approx 75^\circ$



$V_{red} \approx \frac{g_{m3/4} A_e V_{test}}{s C_1}$



$A_e \approx \frac{1}{2} \frac{g_{m1c}}{g_{m3c}} \approx \infty$

finite loop gain $\rightarrow$ CM error are not well controlled

$\omega_{um} \approx \frac{g_{m3/4} A_e}{C_1} = \frac{g_{m3/4}}{C_1}$

