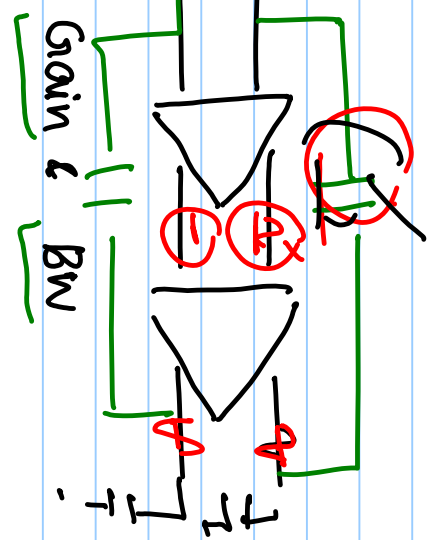
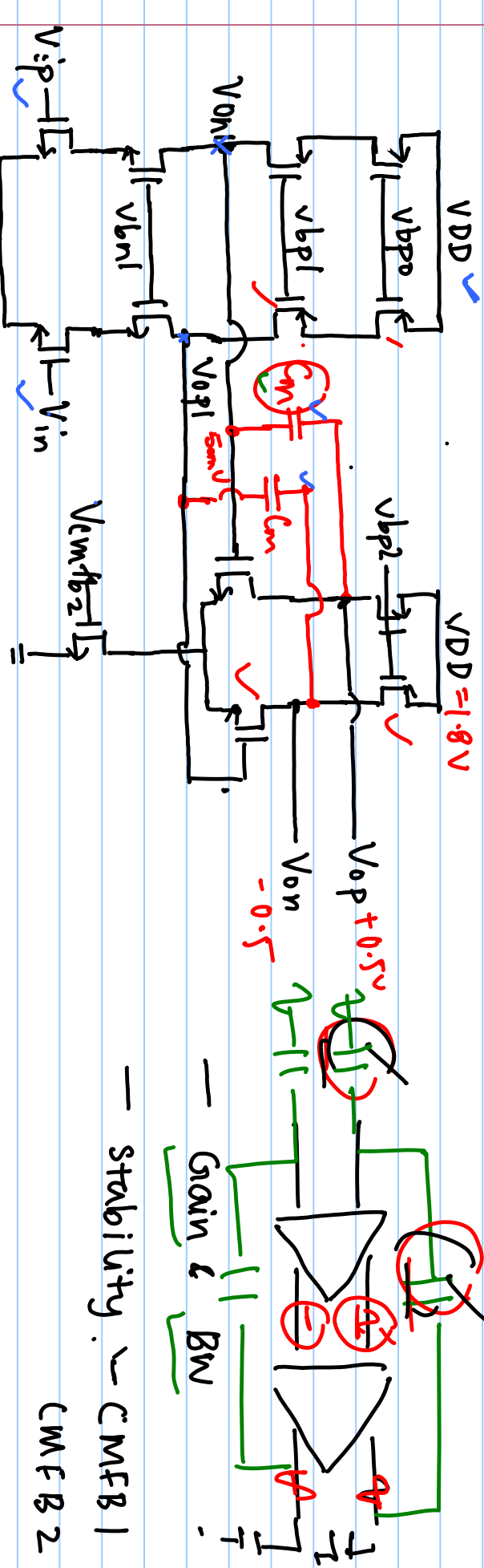


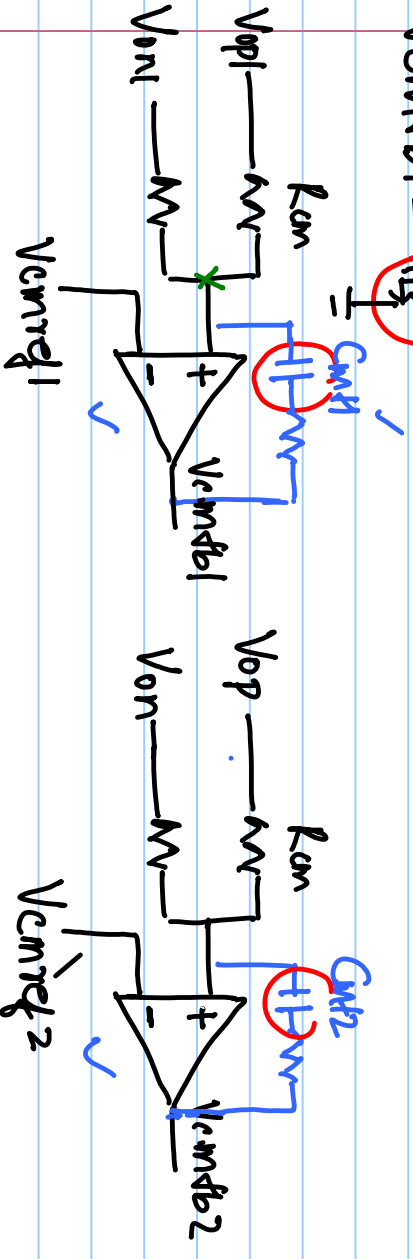
# Lecture # 37

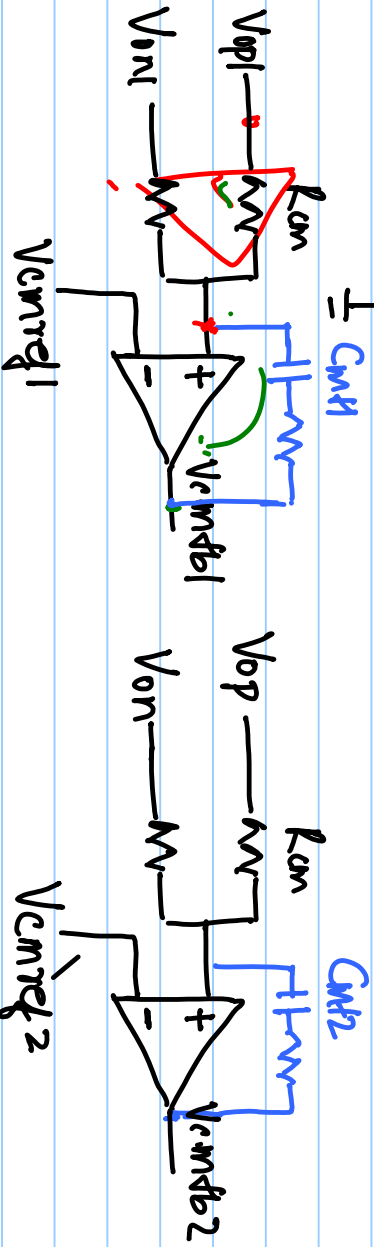
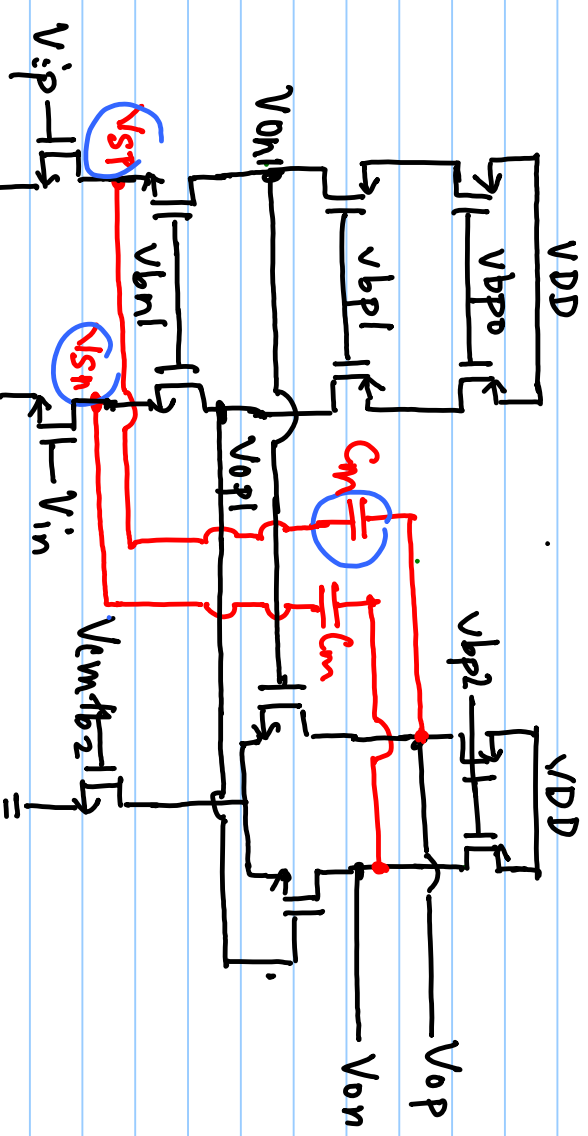
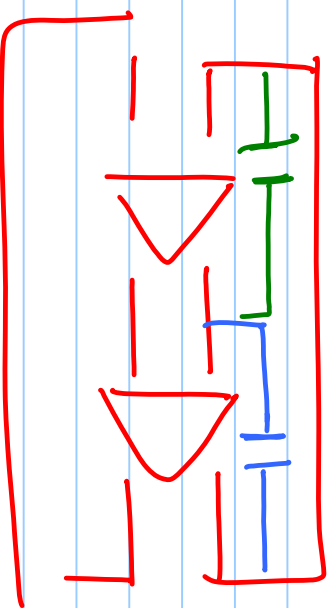


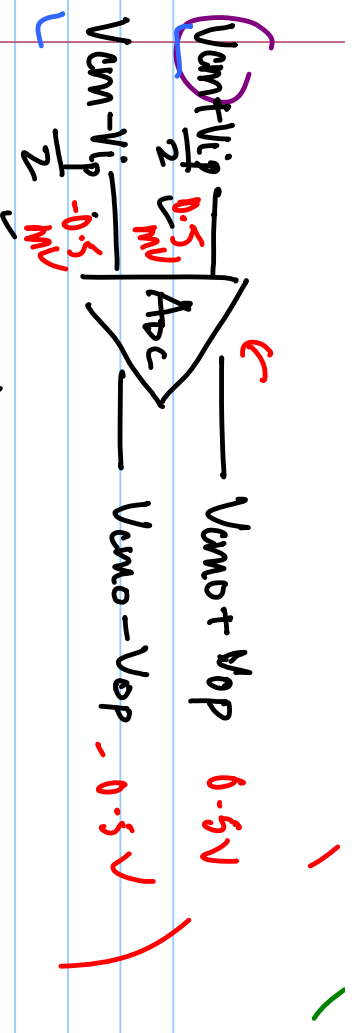
— stability ~ CMFB 1

CMFB 2

$$-\frac{V_{op} - V_{on}}{V_{ip} - V_{in}} = \frac{A_{DC}}{1 + s/\omega_p}$$

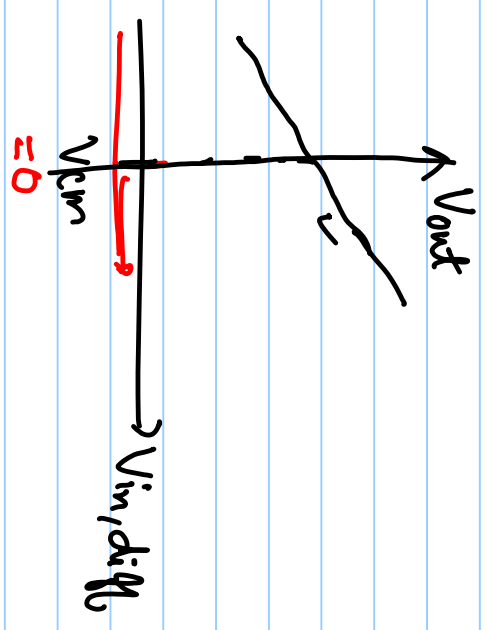
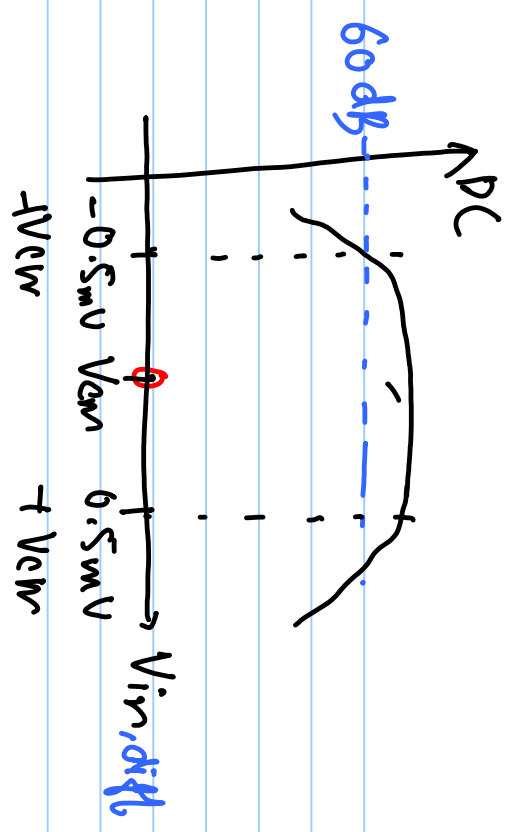


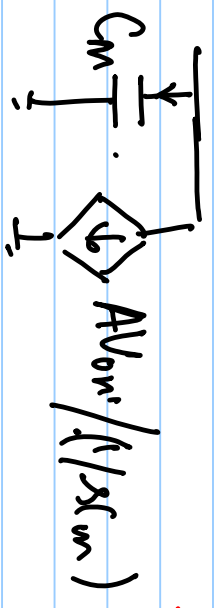
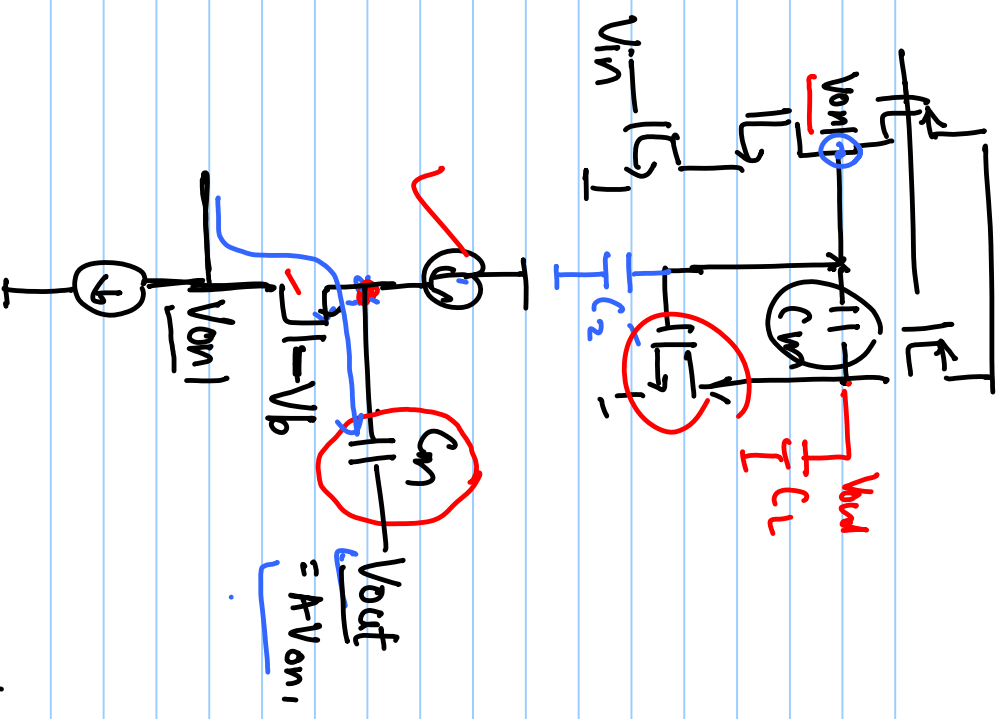
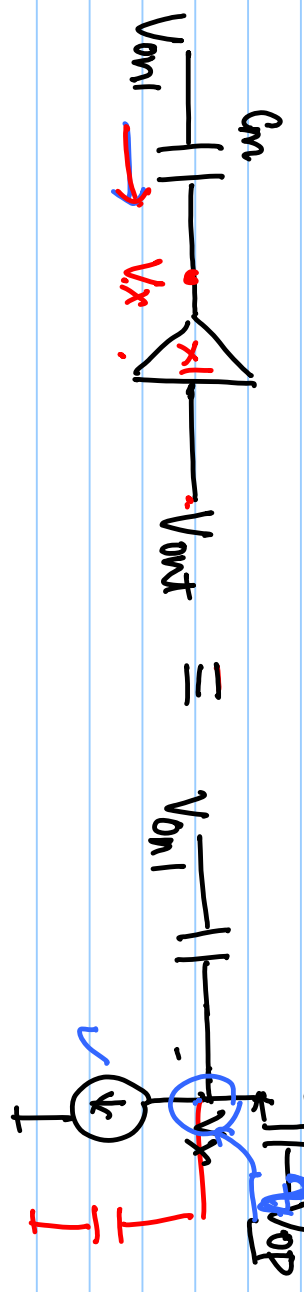
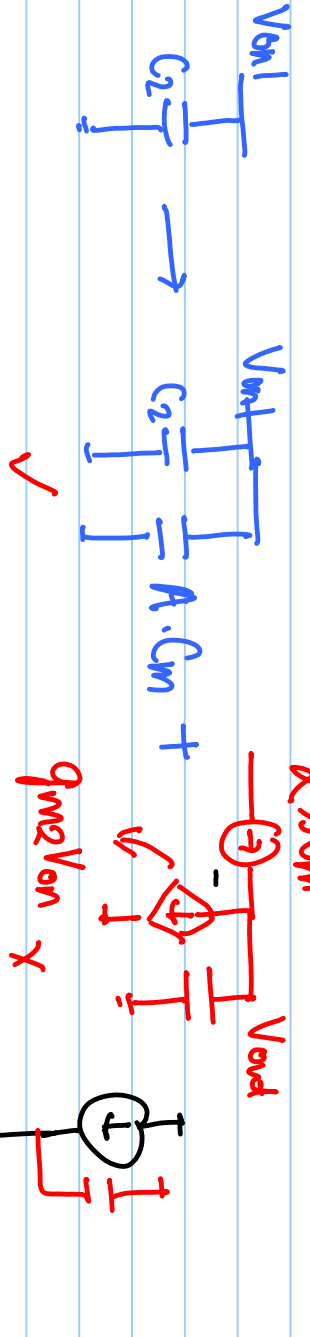
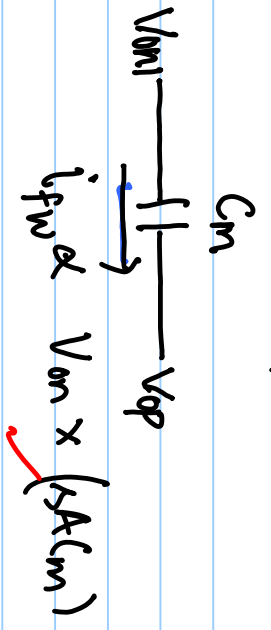




$$A_{dc} = \frac{V_{op}}{V_{ip}}$$

$$0.6 \pm 0.005 = V_{sm} + V_{ip} = 0$$

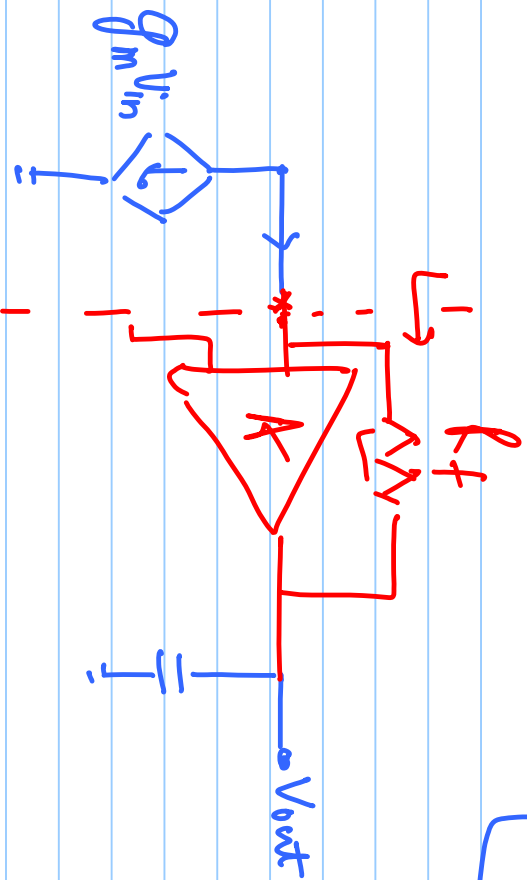
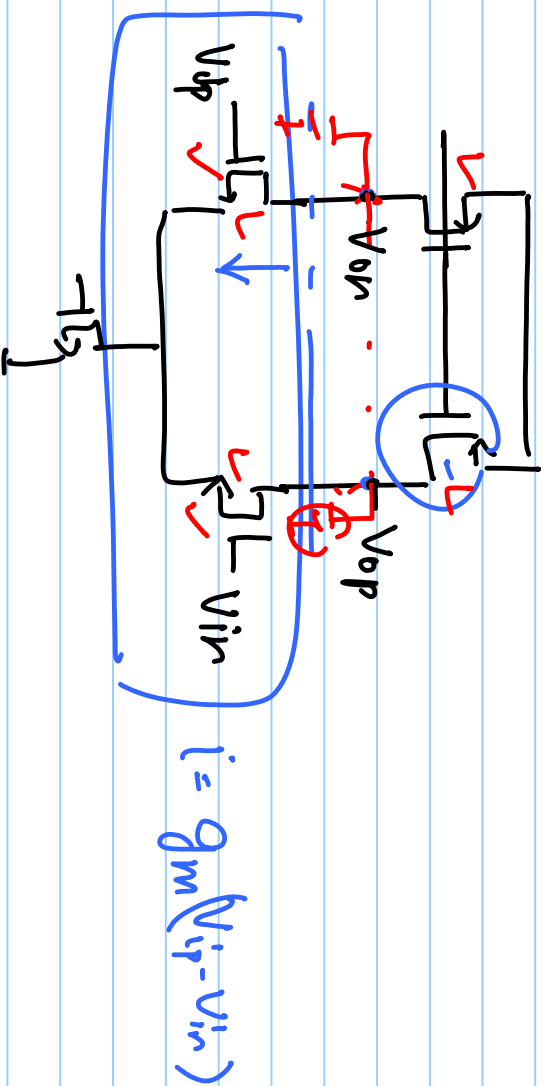
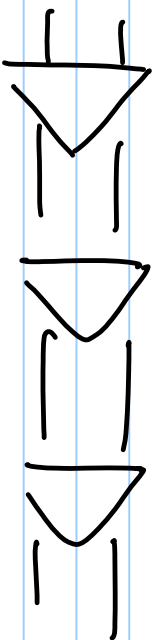




LNTA

Gain = 60dB    BW = 500 MHz.

5 GHz.



$$\frac{V_{out}}{V_{in}} = g_m (R_L \uparrow) = g_m R_L$$

∴