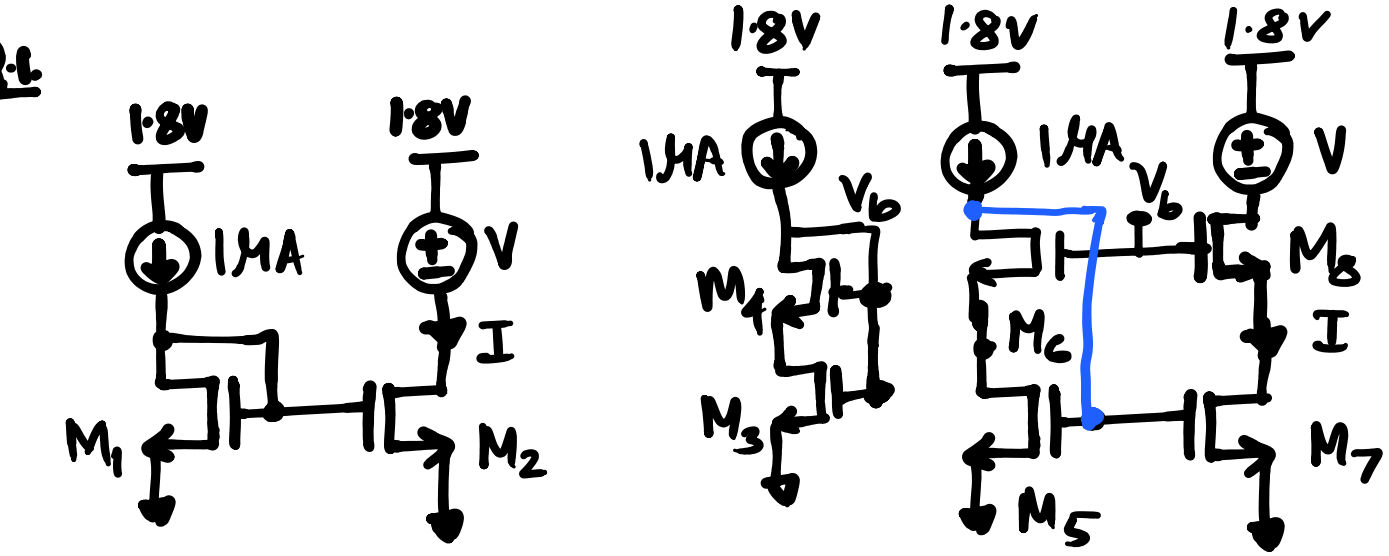
Wednesday, 18 October 2023 8:18 PM

Assignment-2



In the above circuits all transistor except M_3 are identicle. M_3 has W= 0.24μ and L=5μ.

For all other transistors choose W=2μ & L=0.18μ

(a) Plot I as V is varied from 0 to 1.8V

(b) Now change L of device $M_{1,2,4,5,6,7,8}$ to 1μ from 0.18μ and redo the part(a)

(3 Marks)

Q.2 Design a common source amplifier with DC Gain = 30dB and UGB = 50MHz. Minimize the power dissipation. Report all operating points. show its AC magnitude & phase response.
(4 Marks)

Q.3 Perform noise simulation of your designed amplifier and calculate its input referred voltage squared noise voltage in 1MHz BW. Compare it with analytical expression discussed in the class.