2014Fall   D.K.Jeong
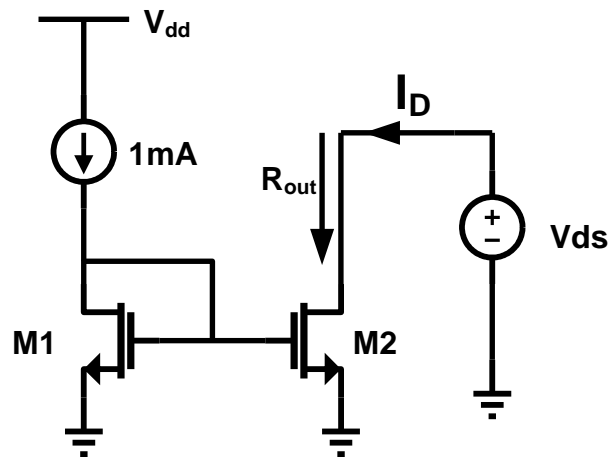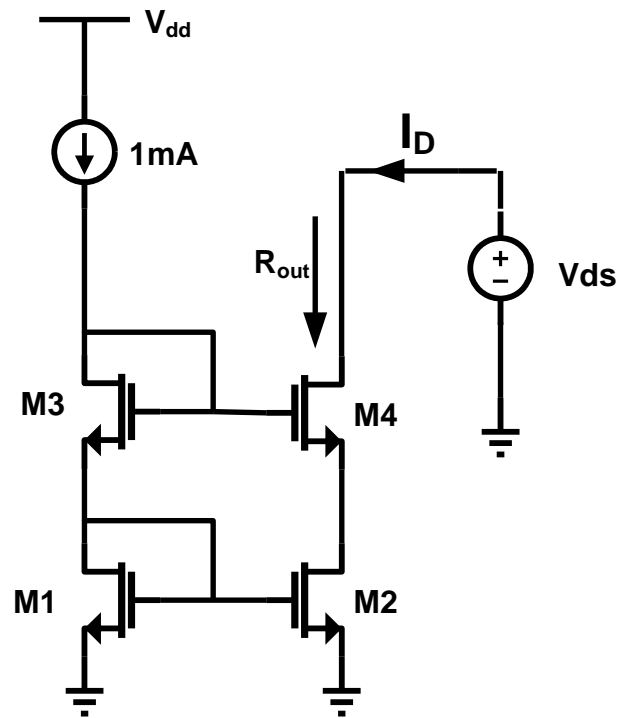
PSPICE Assignments #1

- Due: 2014/10/01(Wed) 3:30PM
- Submit a hardcopy report.
- For any questions, send an e-mail to jhhwang@isdl.snu.ac.kr

1. Device parameters (W=100um, L=0.4um, μ_nC_{ox} = 32uA/V^2, V_{th}=0.5V, V_{dd}=3V, λ=0.2V^{-1})are given for the circuit. When the transistor M1 is operated in the saturation region, answer the following questions.

a) Draw the I_D -V_{ds} curve with Spice simulation.

b) Draw the R_{out}-V_{ds} curve with Spice simulation and compare it with hand-calculated R_{out}.

2. When the device parameters are same as Problem 1, solve the following questions for the circuit.

a) Draw the I_D -V_{ds} curve with Spice simulation.

b) Draw the R_{out}-V_{ds} curve with Spice simulation and compare it with hand-calculated R_{out}.