

**McGill**McGill University
Department of Electrical and Computer Engineering**ECSE34 Intro. to Microelectronics (Winter 2010)****Prof. Anas Hamoui****PROBLEM SET 8**

The underlined problems will be discussed in the Tutorials (in addition to answering your questions on the other assigned problems).

• Problem Set 9 (Feedback)**Section 8.1:** 8.4**Section 8.2:** 8.10**Section 8.4:** 8.28, 8.34, 8.35, repeat exercise 8.5 on p.810 with R_2 replaced by a short circuit.**Section 8.5:** 8.39**Section 8.6:** 8.50**Section 8.7:** 8.55**Section 8.8:** 8.61, 8.64**Section 8.10:** 8.70**NOTES:**

- Prob. 8.34: Assume that the current sources have an incremental output resistance of r_o .
- Prob. 8.35: For simplicity, neglect r_o of the BJTs.
- Prob. 8.39: For simplicity, neglect r_{o5} .
Hint: define the feedback voltage of the transconductance amplifier as the voltage across R_F .
- Prob. 8.55: Hint: The loop can be broken ANYWHERE. The simplest (in terms of finding the termination impedance) is at the gate of Q2.