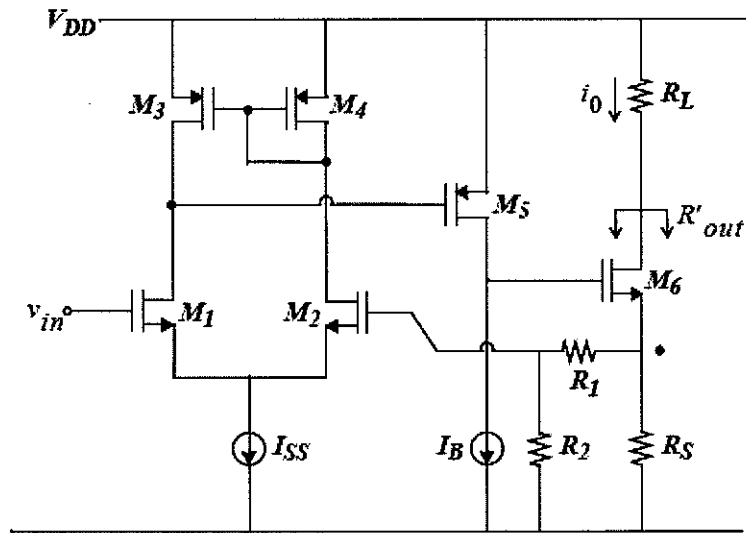


# Qualifying Exam 2009

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This amplifier supplies current  $i_0$  to the load  $R_L$ . Assume all transistors operate in saturation and body effect is negligible.

1. What type of feedback is used in this circuit?
2. What is the feedback factor?
3. Determine the amplifier open-loop gain with loading. Take  $R_L = 0$  for this calculation.
4. Determine the closed-loop output resistance  $R'_{out}$  (impedance at the drain of  $M_6$ ).