

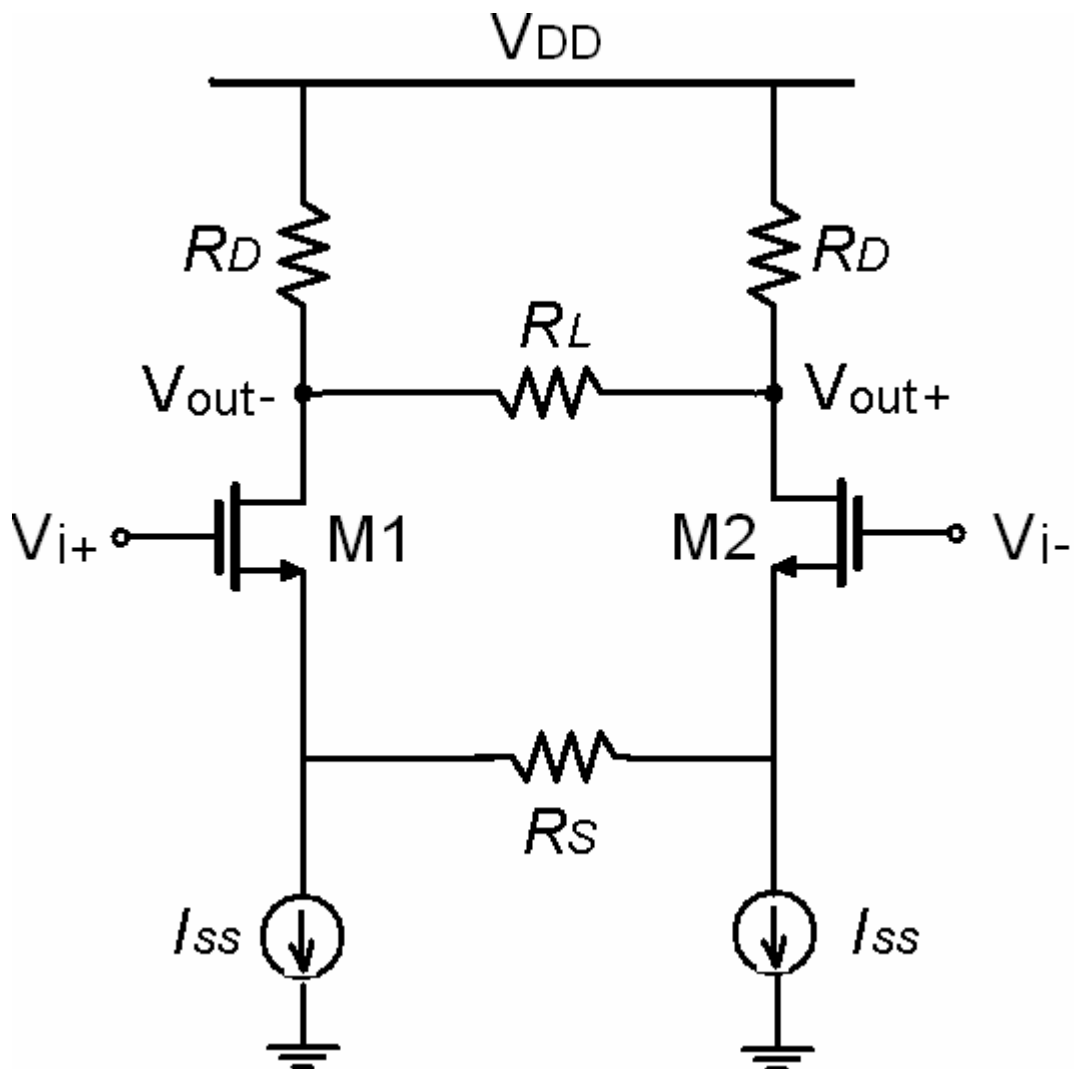
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**Homework #3**  
**(Due 9/17/03)**

**EECS 140**  
**Fall 2003**

1. Neglect body effect and assume  $\lambda = 0$ . Use half circuit concepts to determine the CMRR of the circuit below. (In terms of small signal parameter of the transistor and resistors  $R_D$ ,  $R_L$ ,  $R_S$ .)



2. Assume all MOSFETs are in the saturation region, ignore body effect and assume  $\lambda \neq 0$ . Calculate the small-signal voltage gain of each circuit in terms of  $g_m$  and  $r_o$ .

