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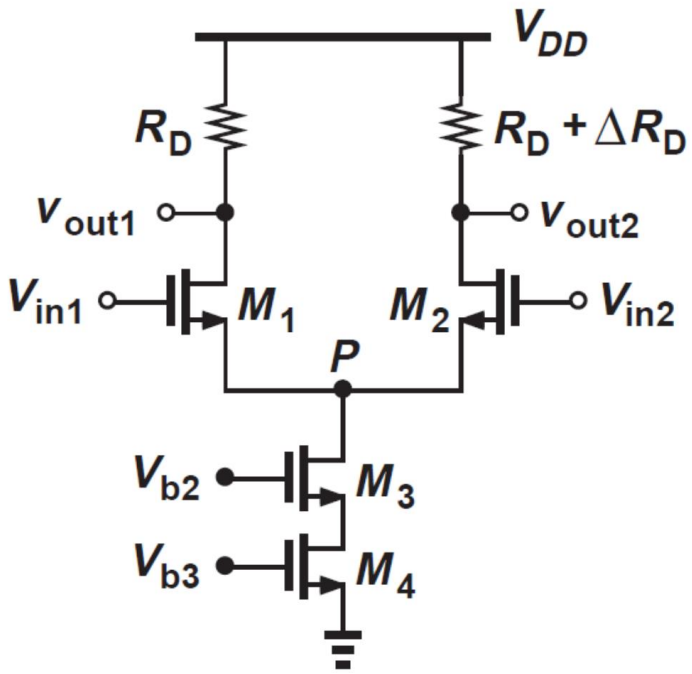
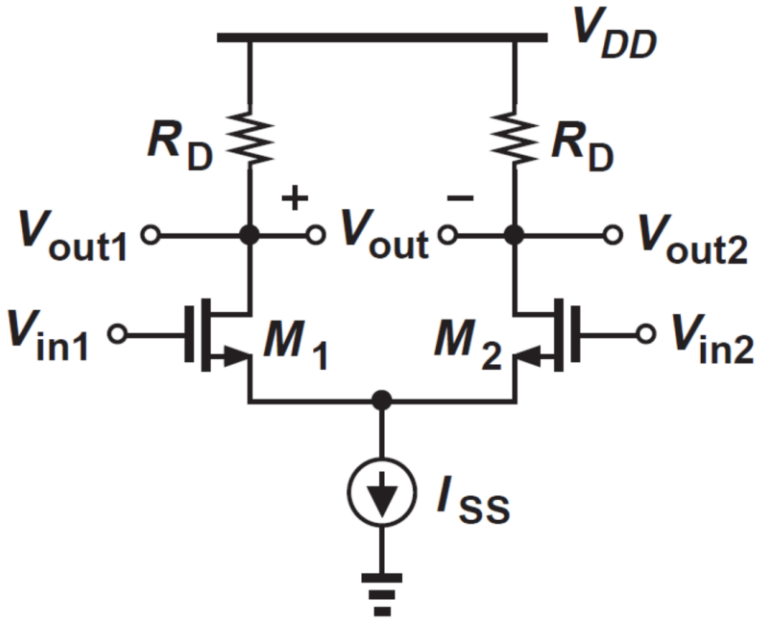


Q2. Find W/L of M1 and M2 of the MOS differential pair for a voltage gain of 5 and a power dissipation of 1 mW if the equilibrium overdrive, $V_{GS} - V_{TH}$, must be 150 mV. Assume $\lambda = 0$, $\mu_n C_{ox} = 100\ \mu A/V^2$, $V_{DD} = 1.8V$, and $g_m = g_{m1} = g_{m2}$.

→ $|g_m R_D|$



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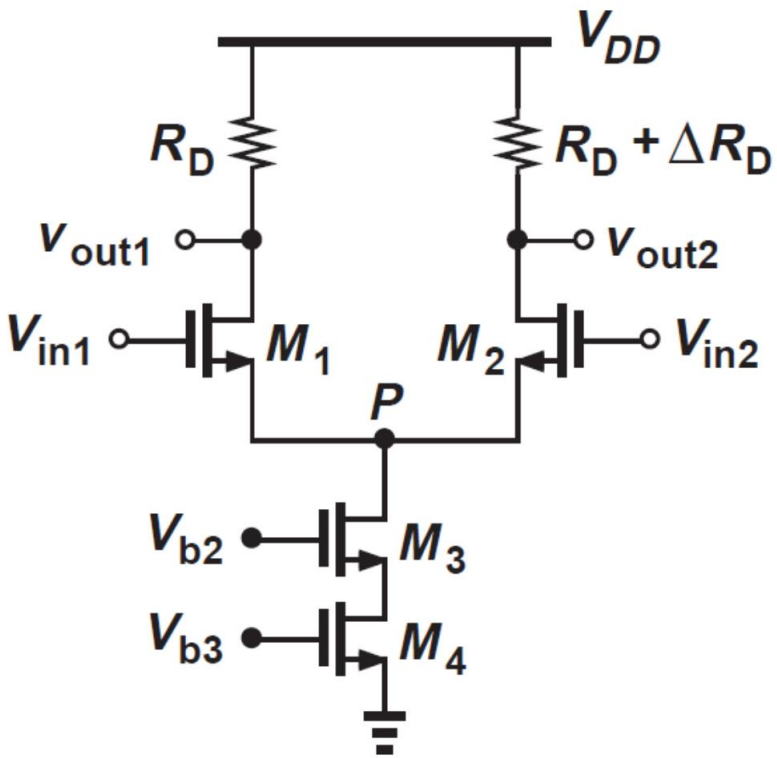

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