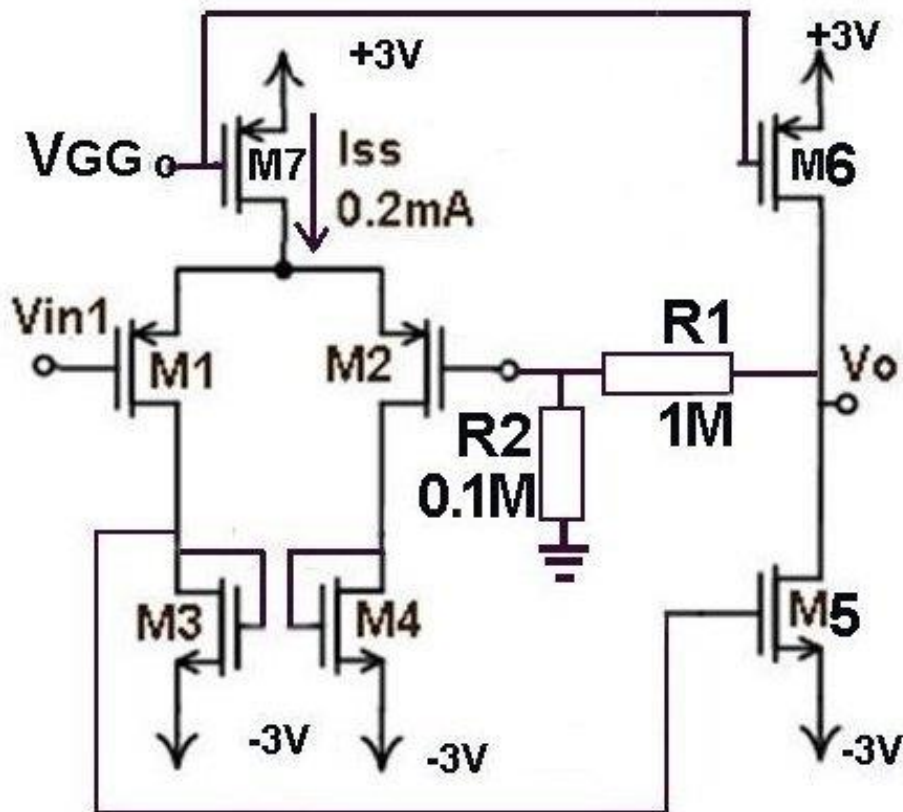


NAME:**NO:**

For the transistors in the figure $V_{DD}=3.3V$, $C_{ox}=50\text{ fF}/(\mu\text{m})^2$, $\mu_n = 0.06\text{ m}^2\cdot\text{V}^{-1}\cdot\text{s}^{-1}$, $\mu_p = 0.02\text{ m}^2\cdot\text{V}^{-1}\cdot\text{s}^{-1}$, $V_{THN} = 0.5V$, $V_{THP} = -0.5V$, $V_{AN}=V_{AP}=100V$, $(W/L)_1=(W/L)_2=12$, $(W/L)_3=(W/L)_4=2$, $(W/L)_5=4$, $(W/L)_6=(W/L)_7=12$ and (for all the transistors) $L=2\mu\text{m}$ are given.

$V_{G1}=V_{G2}=0$ for DC Case.

$C_{gs}=W\cdot L\cdot C_{ox}$

$C_{gd}=C_{gs} / 3$

Find the **Phase Margin** of the circuit.