

H.W. #15

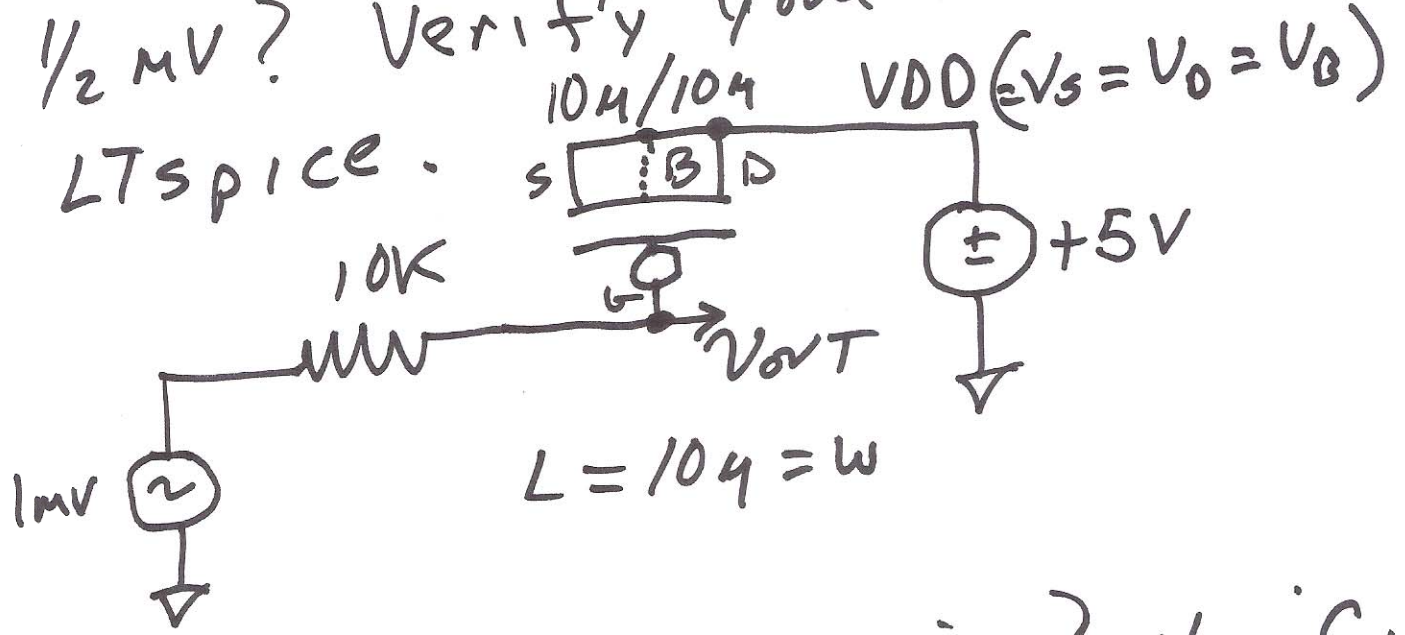
For the following problems use

$V_{THN} = 800\text{mV}$, $V_{THP} = 900\text{mV}$,

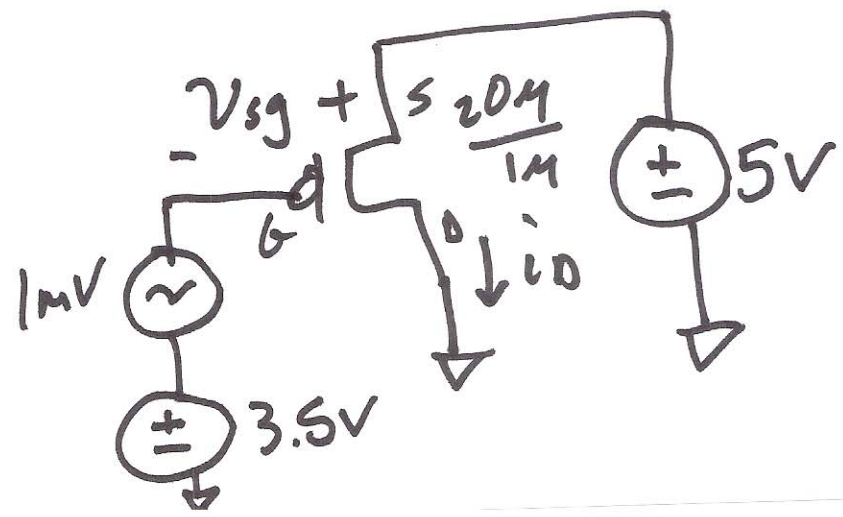
$K_{PN} = 120\mu\text{A/V}^2$, $K_{PP} = 40\mu\text{A/V}^2$

$t_{ox} = 20\text{nm}$.

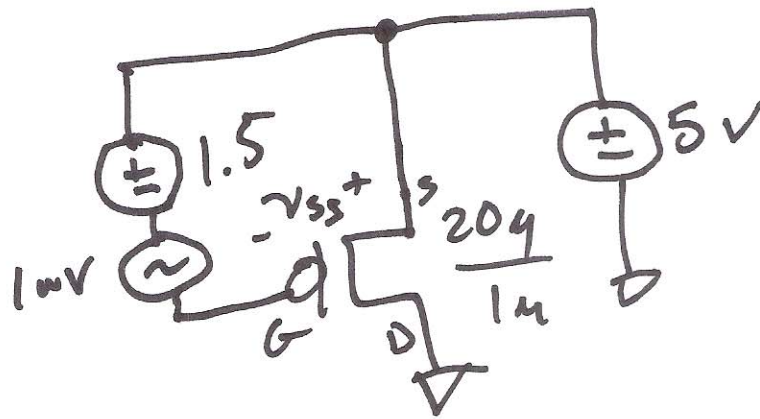
1) At what frequency is the Amplitude $\frac{1}{2}\text{mV}$? Verify your answer with LTspice.



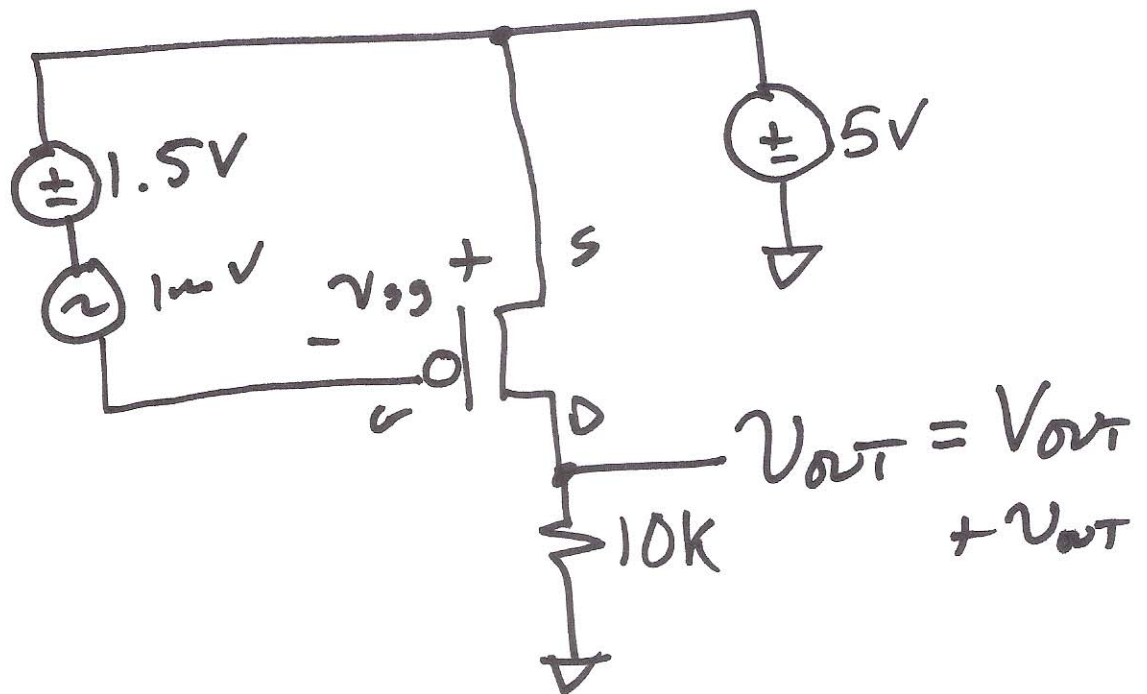
2) What are I_D and i_d ? Verify with LTspice.



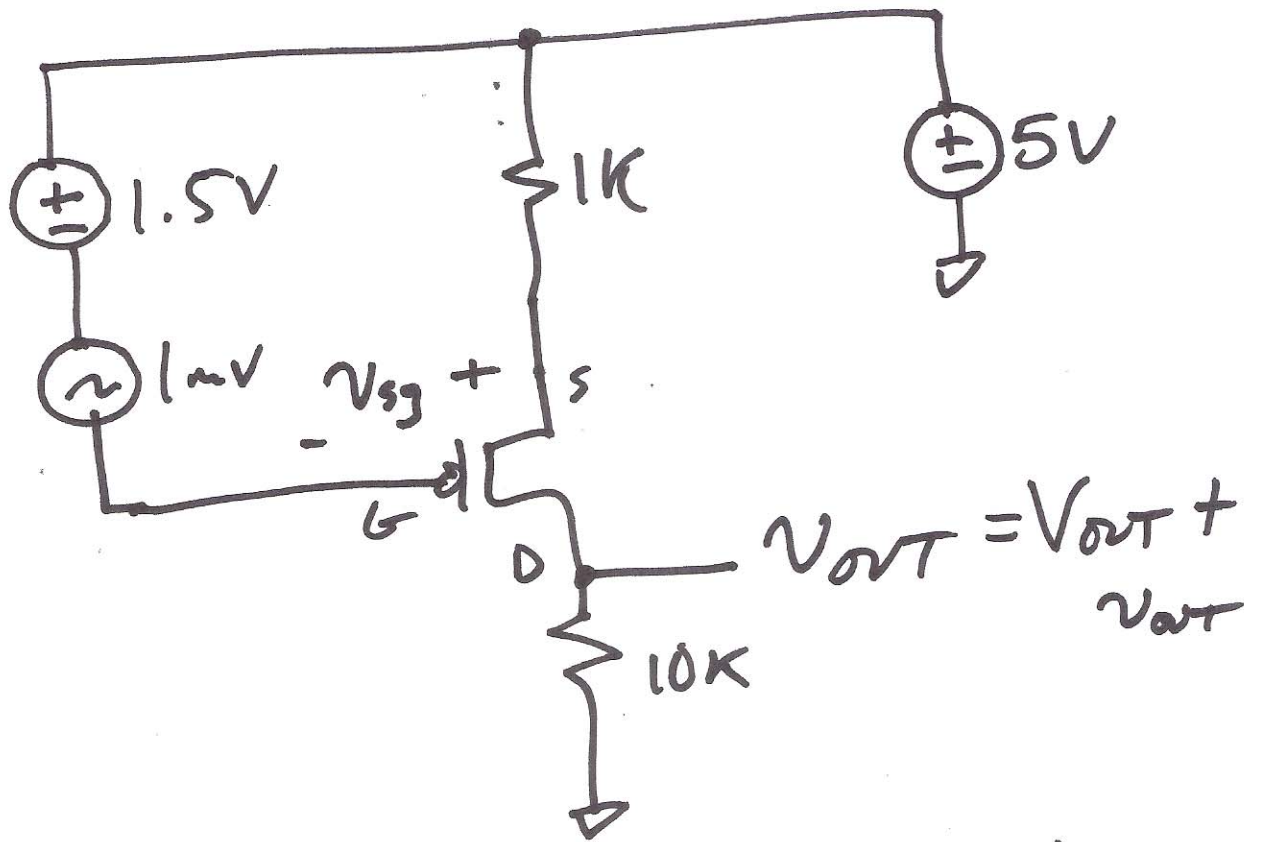
3) Repeat 2) for the following.



4) What are V_{out} & v_{out} ?
Verify with LTSPICE.



5) Repeat 4) for the following.



6) Find i_d and I_D ~~for~~ in the following circuit. Verify LTSpice.

