QUIZ NO. 6

NAME_____Score_____/10

A NMOS transistor amplifier is shown. Assume the parameters of the transistor are $K_N = 1\text{mA/V}^2$, $V_{TN} = 1\text{V}$, and $\lambda = 0$. (a.) Find an algebraic expression for the small signal input resistance, R_{in}, the output resistance, R_{out} , the voltage gain, v_{out}/v_{in}, and the current gain, i_{out}/i_{in}. (c.) Numerically evaluate the small signal input resistance, R_{in}, the output resistances R_{out} , the voltage gain, v_{out}/v_{in}, and the current gain, i_{out}/i_{in}.