

Special Problem 5.7-1

In the circuit below:

- the DC drain current is $I_D = 4.0 \text{ mA}$.
- the DC gate voltage of Q_1 is $V_{G1} = 10.0 \text{ V}$.
- the DC source voltage of Q_1 is $V_{S1} = 7.0 \text{ V}$.
- MOSFETs Q_1 and Q_2 are in saturation (you do not need to check).

Carefully draw the **small-signal circuit** for this amplifier and then determine the **small signal gain** $A_{vo} = v_o/v_i$.

