Special Problem 4.6-5

The capacitors in the circuit below are very large.

I have completed the DC analysis—I determined that $V_{GS} = 4.0 \text{ V}$, and CHECKED that the MOSFET is in saturation.

Finish the remainder of the analysis, to:

1. Determine and carefully draw the simplified small-signal circuit (be complete and precise!).

2. Determine the small-signal voltage gain ($A_v = \frac{v_o}{v_i}$) of the amplifier below.