Special Problem 4.3-2

Assume the MOSFET in the circuit below is in the **triode** region.

The current through the resistor \( R_1 \) is 1 mA.

1) Find the value of resistor \( R \).

2) Determine if the assumption is correct.

**Hint:** Carefully consider numeric signs (+/-).

\[ K = 1.0 \text{ mA}/V^2 \]

\[ V_t = -2.0 \text{ V} \]

\[ R_S = 1 \text{ K} \]

\[ R_f = 1 \text{ K} \]