Special Problem 5.6-4

In the circuit below, Q_1 has K=1.0 mA/V^2 and V_{t1} = **1.0** V.

The transistor Q_2 likewise has K = 1 mA/V^2, **but** has a threshold voltage of V_{t2} = **2.0** V.

In other words Q_1 and Q_2 are **not** identical!

The resistor R_2 has been selected such that Q_2 is in saturation.

1) **Determine R_1** (note I said R_1!)so that the **drain current** of Q_2 (note I said Q_2!) **is 4.0 mA**.

2) What is the **largest** possible value of resistor **R_2** so that Q_2 remains in **saturation?**