Special Problem 3.3-10

The circuit below includes one **small-signal** voltage source v_s.

The two junction diodes are **not** identical: D_1 has ideality factor $n = 1.0$, while D_2 has an ideality factor $n = 2.0$.

I have performed a **DC analysis** of this circuit (so you **don't** have to!), and have determined that:

1. D_1 is forward biased, with $I_{D1} = $ **10.0 mA**

2. D_2 is forward biased, with $I_{D2} = $ **1.0 mA**

Now, **you** perform the **small-signal analysis**, and:

1. Draw precisely the **small-signal circuit**, with **numeric** values for **each** resistor.

2. Determine (in terms of v_s), the **small-signal voltages** across each diode (i.e., V_{d1} and V_{d2}).