Special Problem 1.7-2

Homer has designed a digital inverter using his very own technology (i.e., not CMOS).

This inverter exhibits a transfer function with the following characteristics:

1. $V_{OL} = 0.2 \, \text{V}$
2. $V_{OH} = 4.9 \, \text{V}$
3. Its transition region extends from 2.2 V to 3.9 V

Determine $V_{IL}$, $V_{IH}$, and both noise margins for Homer's inverter.