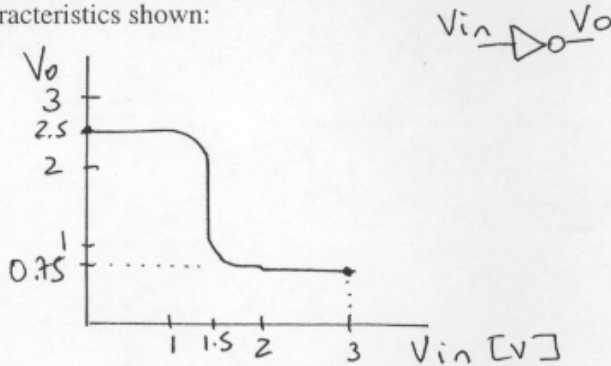


Your Name: _____

Chapter 2: Problem 1 (10 points): Determine noise margins for the inverter with characteristics shown:



Chapter 2: Problem 2 (10 points): Fill in the name of the region that corresponds to the given transistor current expression:

$$I_{ds} = \begin{cases} 0 & \dots \text{region} = \\ \beta [V_{gs} - V_t] V_{ds} - \frac{V_{ds}^2}{2} & \dots \text{region} = \\ \frac{\beta}{2} (V_{gs} - V_t)^2 & \dots \text{region} = \end{cases}$$

Chapter 2: Problem 2 (10 points): Do the reverse engineering on those two layouts (a) and (b). Draw the schematic diagram for each circuit:

