HW2

1) ONE LAYER

As per ground rule we have 2 um metal on center

1000 um : 500 lines on 2 um center

Length of wire/layer = 500 x 1 cm + 1 cm
               = 501 cm/layer

Total length = 8 lay / 501 cm/lay = 4008 cm
               = 400.8 meters

Total length ≈ 400.8 football fields

2) qpinB 4.6

\[ \text{UNIT INVERTER} \]

\[ \text{Logic} = \frac{12C}{12C} = 1 \]

\[ \text{Parasitic Delay} \]

\[ R = \frac{4}{R_{\text{inv}}} \]

\[ C = 4C_{\text{inv}} \]

\[ \therefore \frac{1}{4} R_{\text{inv}} 4C_{\text{inv}} = R_{\text{inv}} C_{\text{inv}} = P_{\text{inv}} \]

\[ \therefore P = P_{\text{inv}} \]