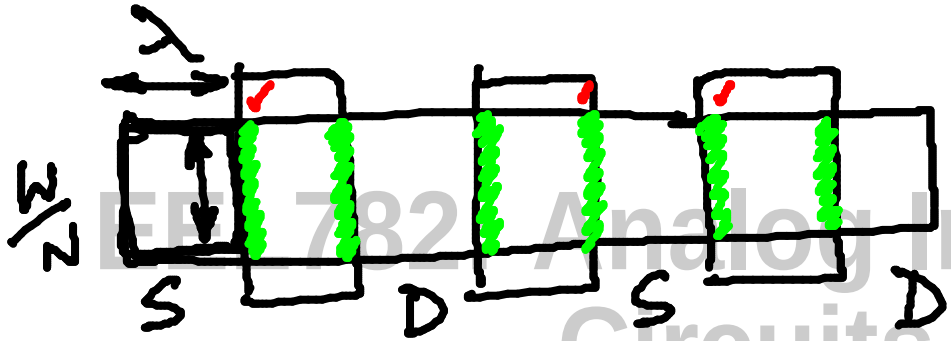



$N\left(W/N + W\right)$



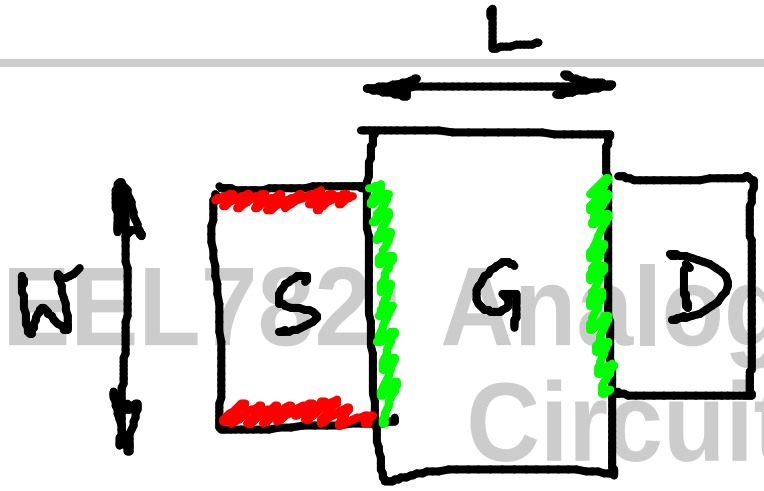
$$\left(\frac{N+1}{2}\right)\left(2\lambda + 2W/N\right) = (N+1)\lambda + (N+1)W/N$$

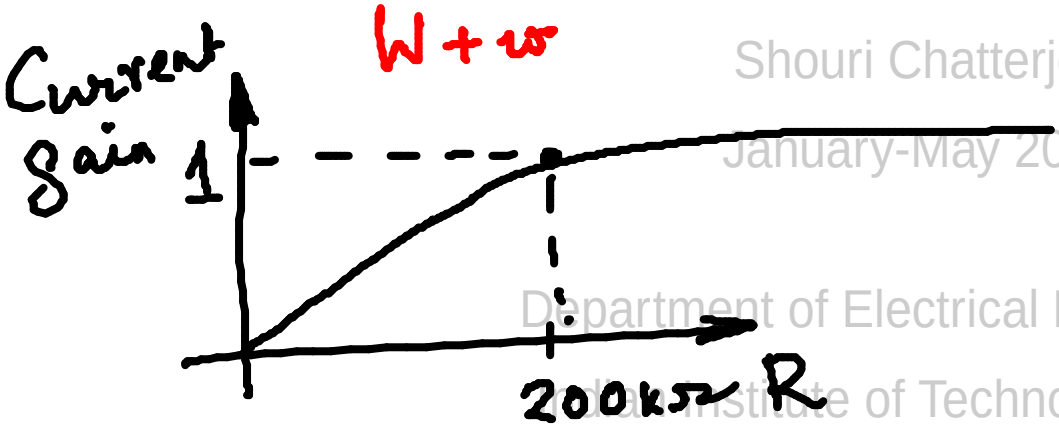
$$= (N+1)\lambda + W + (W/N)$$

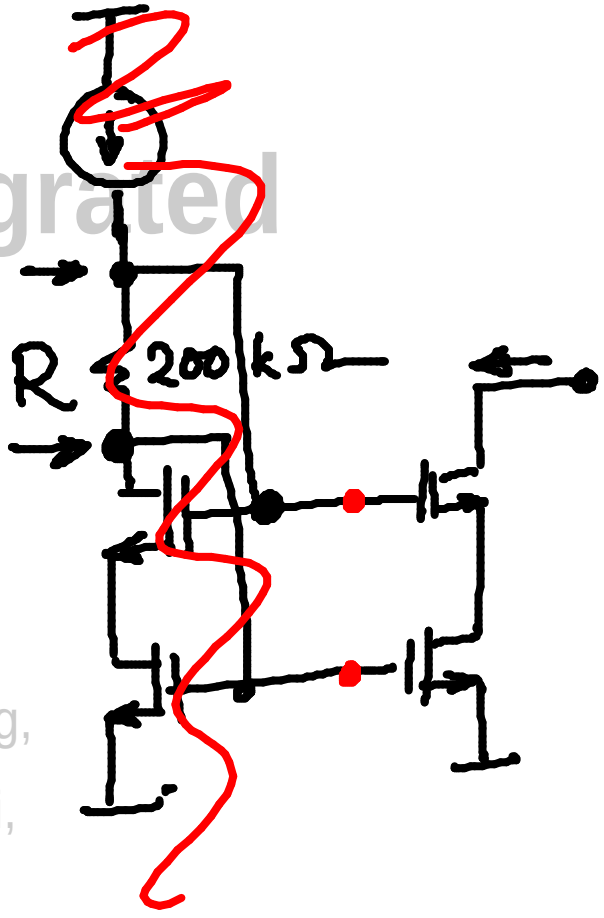
$2\lambda + 2W$

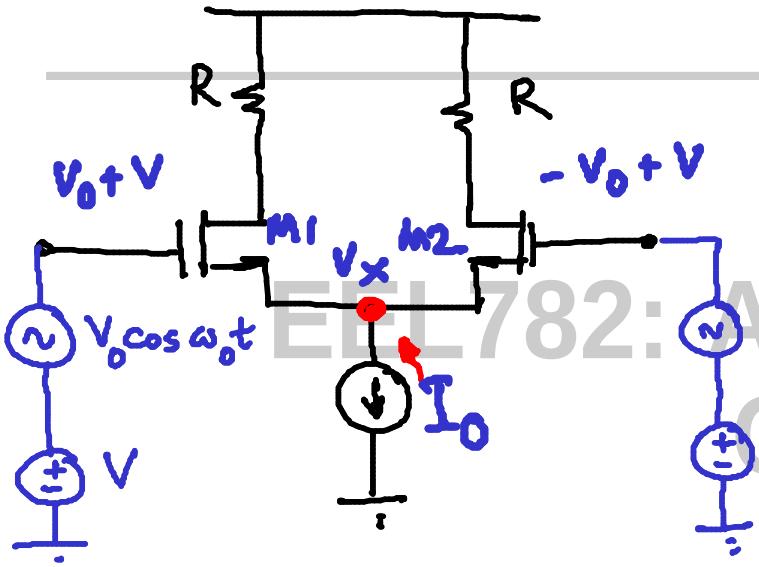
Shouri Chatterjee
January-May 2009
Department of Electrical Engineering,
Indian Institute of Technology, Delhi,
Hauz Khas, New Delhi 110016

$N \cdot W/N \cdot l = W \cdot l$





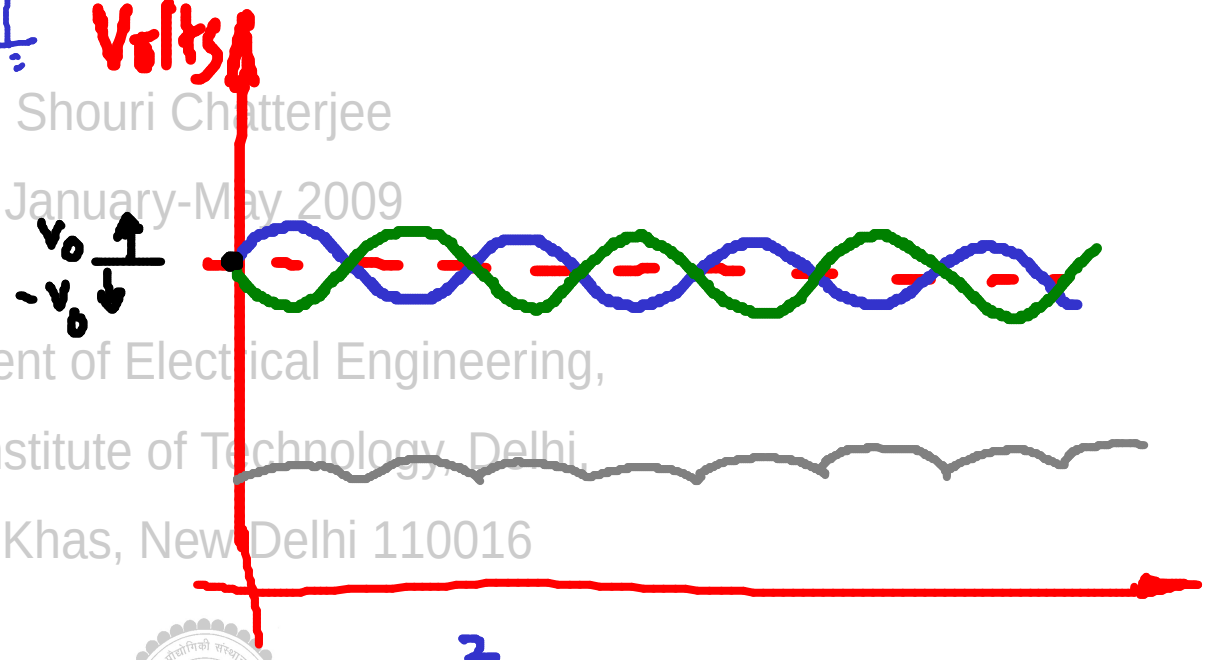

$$I = k \cdot V_{ov}^2$$

$$I_1 = k\left(V_0+V-V_x-V_T\right)^2$$

$$I_2 = k\left(-V_0+V-V_x-V_T\right)^2$$

$$I_1+I_2=I_0$$






$$I_0 = k\left(V-V_x-V_T\right)^2$$

$$\frac{I_0}{2}$$

$$V_{GS} = V_0+V_T+\sqrt{I_0/2K-V_0^2}$$

$$V_{ov} = V_0+\sqrt{I_0/2K-V_0^2}$$

$$\left(V_0+V-V_x-V_T\right)^2+\left(-V_0+V-V_x-V_T\right)^2 = I_0/K$$

$$\left(V-V_x-V_T\right) = \sqrt{I_0/2K-V_0^2}$$

$$V_x = \left(V-V_T\right)-\sqrt{I_0/2K-V_0^2}$$