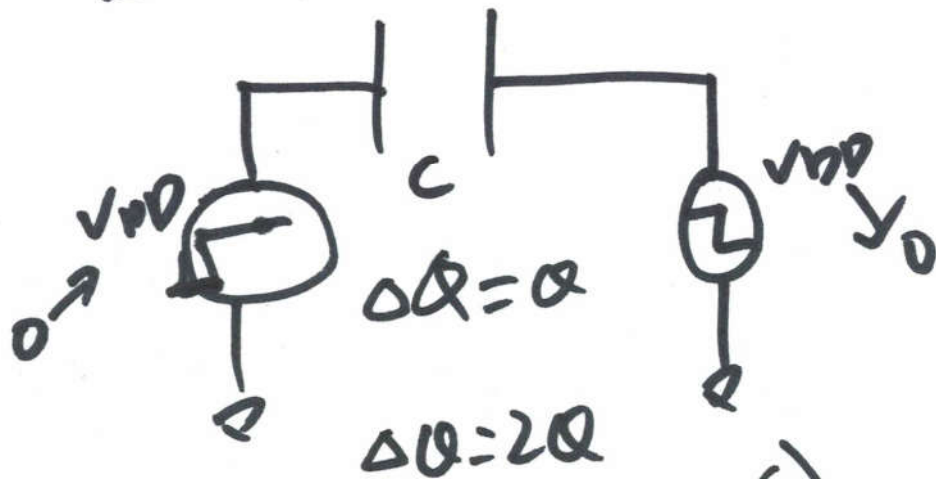


# Models for Digital Design.

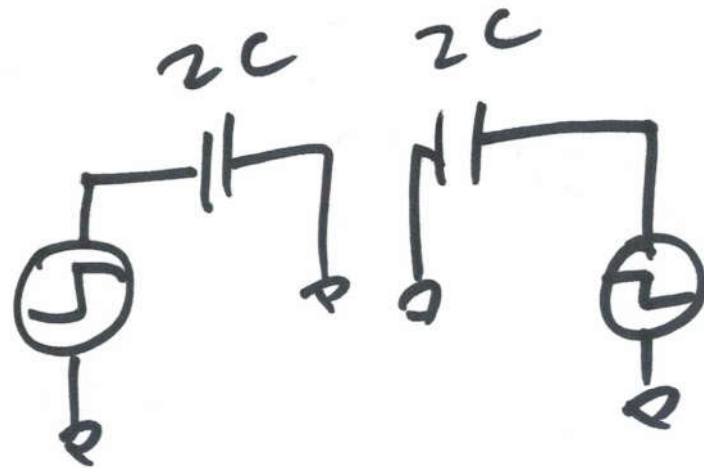
## Miller Effect



$$Q = V \cdot C$$



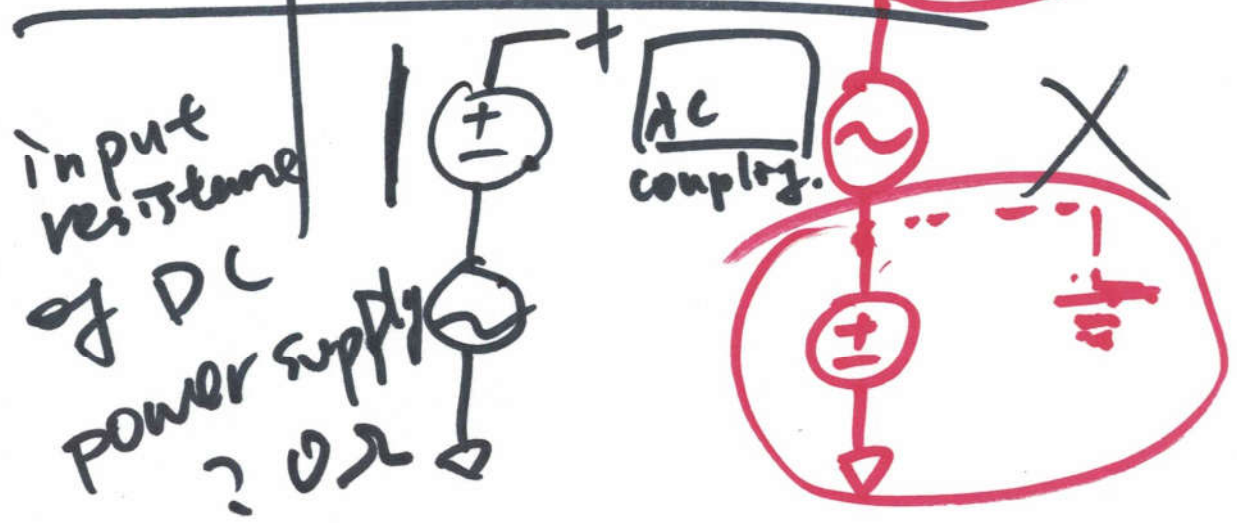
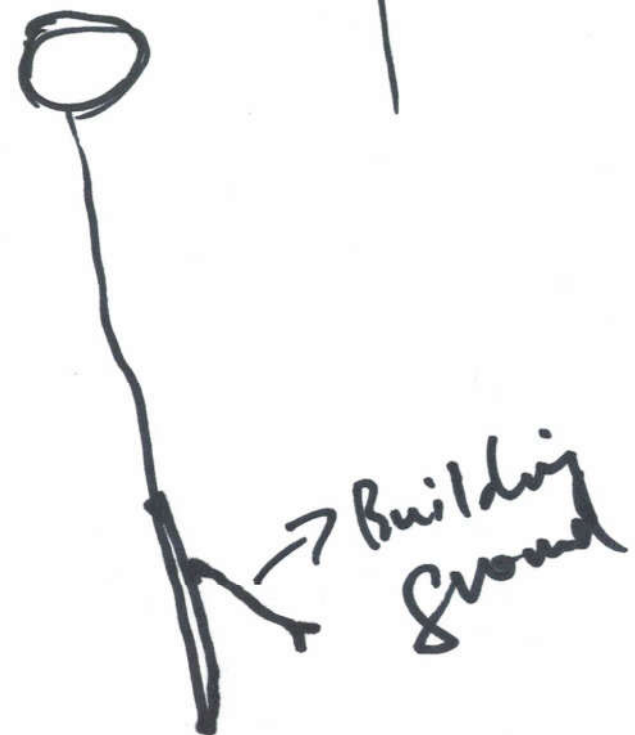
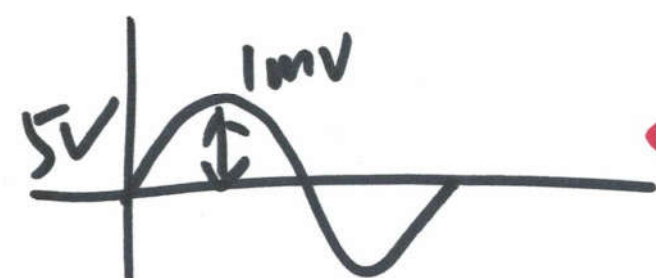
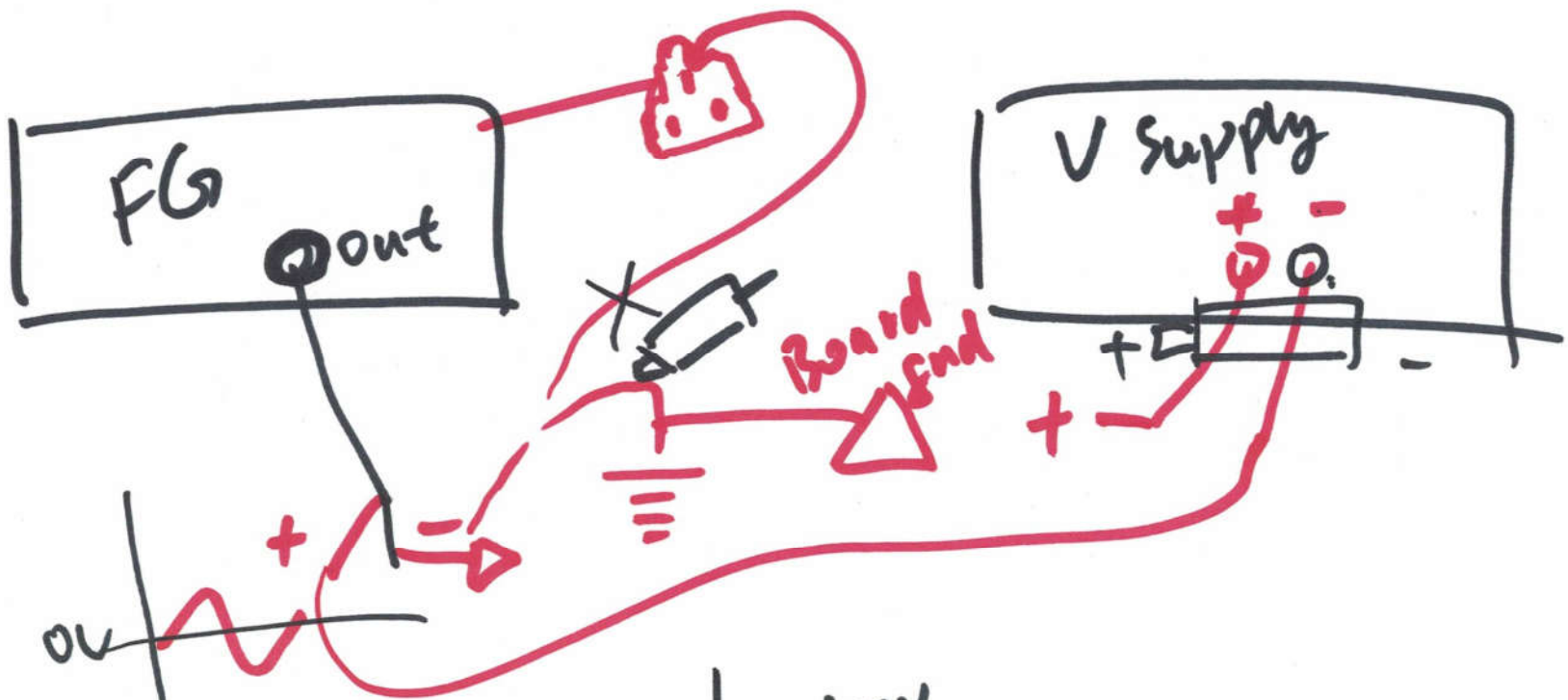
$$C_{eff} = 2C$$



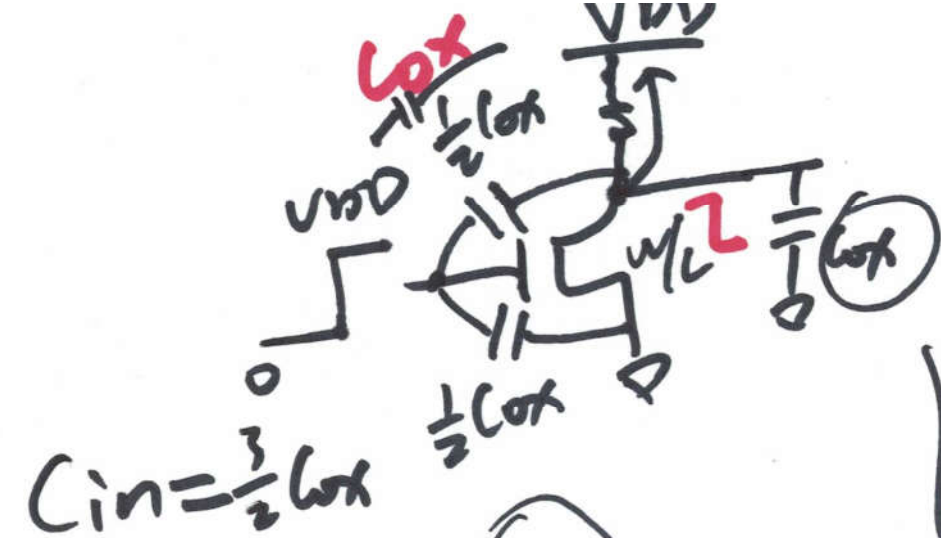
$$2Q = V_{DD} \cdot C$$

$$C_{eff} = \frac{2Q}{V_{DD}}$$

(2)



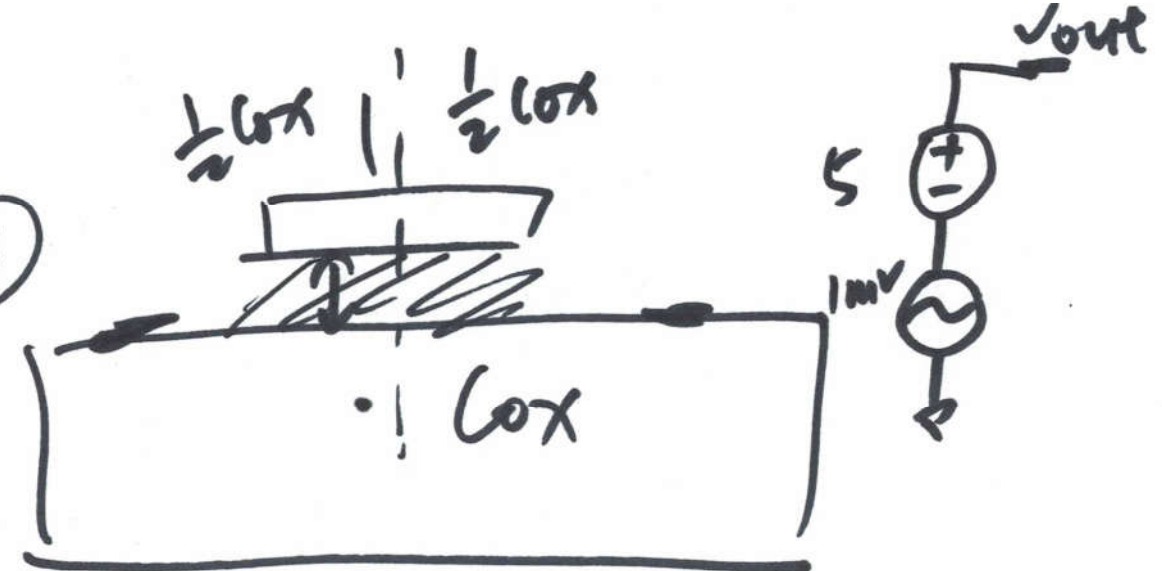
2



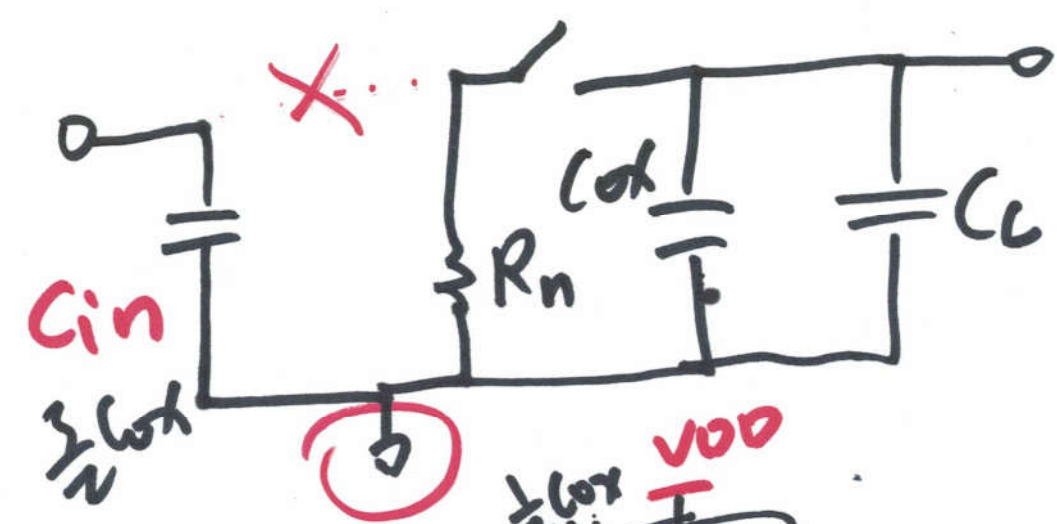
$$C_{in} = \frac{3}{2} C_{ox}$$

$$C_{out} = C_{ox}$$

$C_{ox} = C'_{ox} \cdot W \cdot L$   
 determined by the process



DC source is the AC ground.



$$C_{in} = \frac{3}{2} C_{ox}$$

