

$$\beta = \frac{K_P}{2} \frac{W}{L} \Rightarrow \frac{\text{amps}}{\text{volt}^2}$$

P. 2
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$$\beta_P (V_{dd} - v_O - |V_{thP}|)^2$$

$$= \beta_n (v_O - V_{thn})^2$$

or by $\sqrt{\quad} \Rightarrow$

$$V_{dd} - v_O - |V_{thP}| = \pm \sqrt{\frac{\beta_n}{\beta_P}} \cdot (v_O - V_{thn})$$

can not have the - sign as
assuming M_n & M_P on

$$(1 + \sqrt{\frac{\beta_n}{\beta_P}}) v_O = V_{dd} - |V_{thP}| + \sqrt{\frac{\beta_n}{\beta_P}} V_{thn}$$

$$v_O = \frac{V_{dd} - |V_{thP}| + \sqrt{\frac{\beta_n}{\beta_P}} V_{thn}}{1 + \sqrt{\frac{\beta_n}{\beta_P}}}$$

as a check if $M_n \equiv M_P \Rightarrow v_O = \frac{V_{dd}}{2}$
?