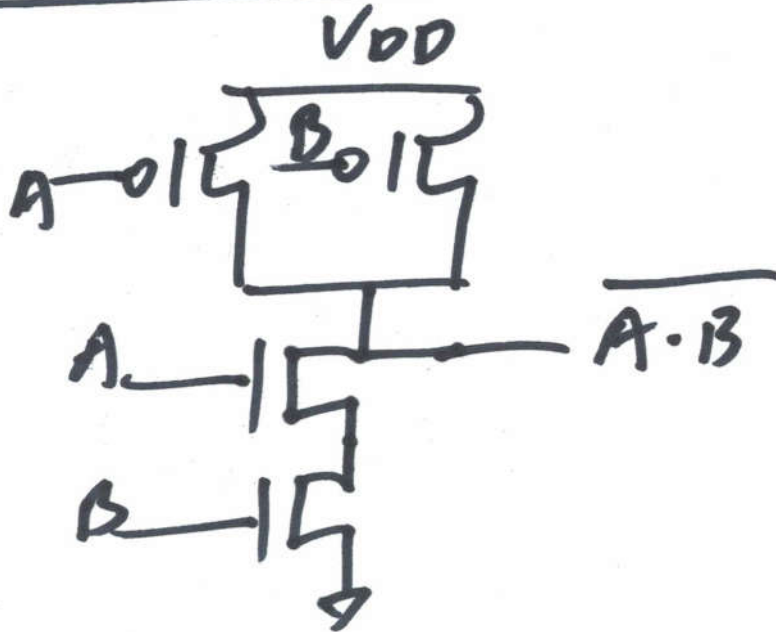


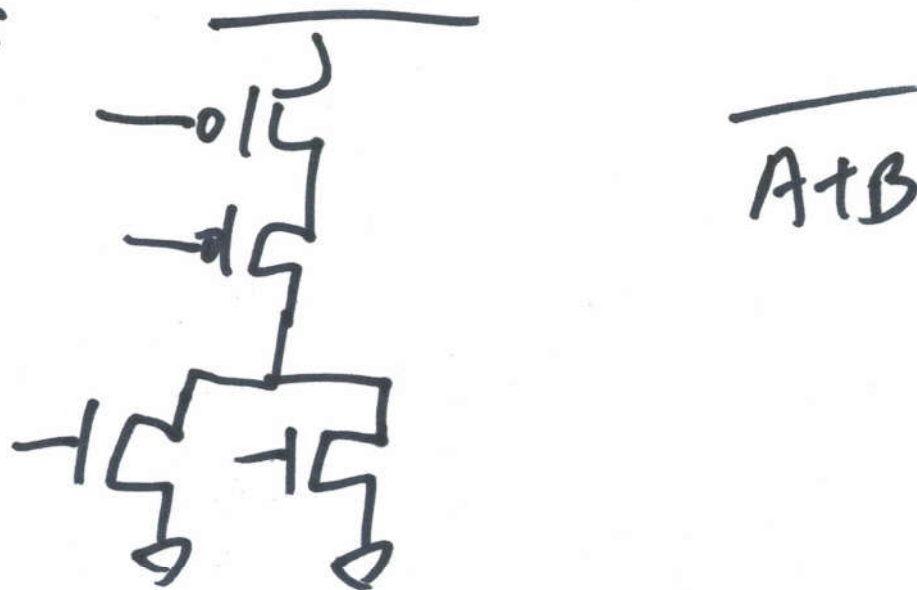
A O I (AND-OR-Invert Logic)

NAND:

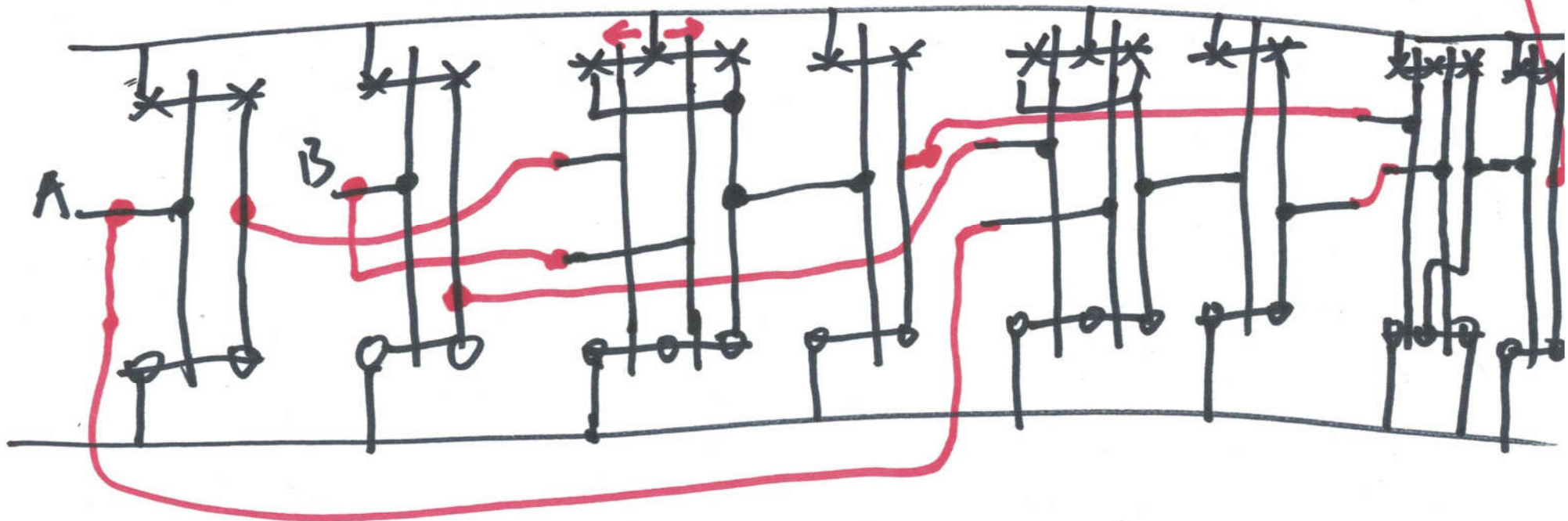
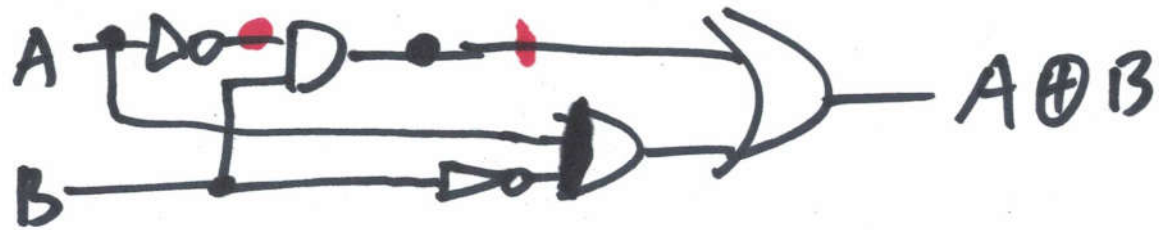


A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

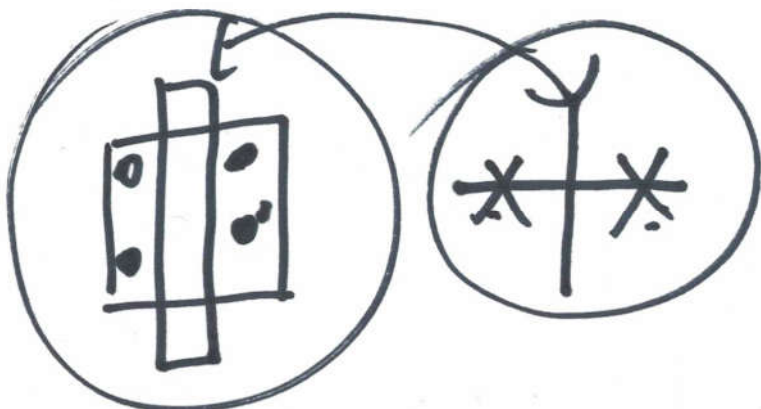
NOR:



$$\text{XOR: } Y = \underline{\bar{A}}B + A\underline{\bar{B}} = A \oplus B$$



$A \oplus B$



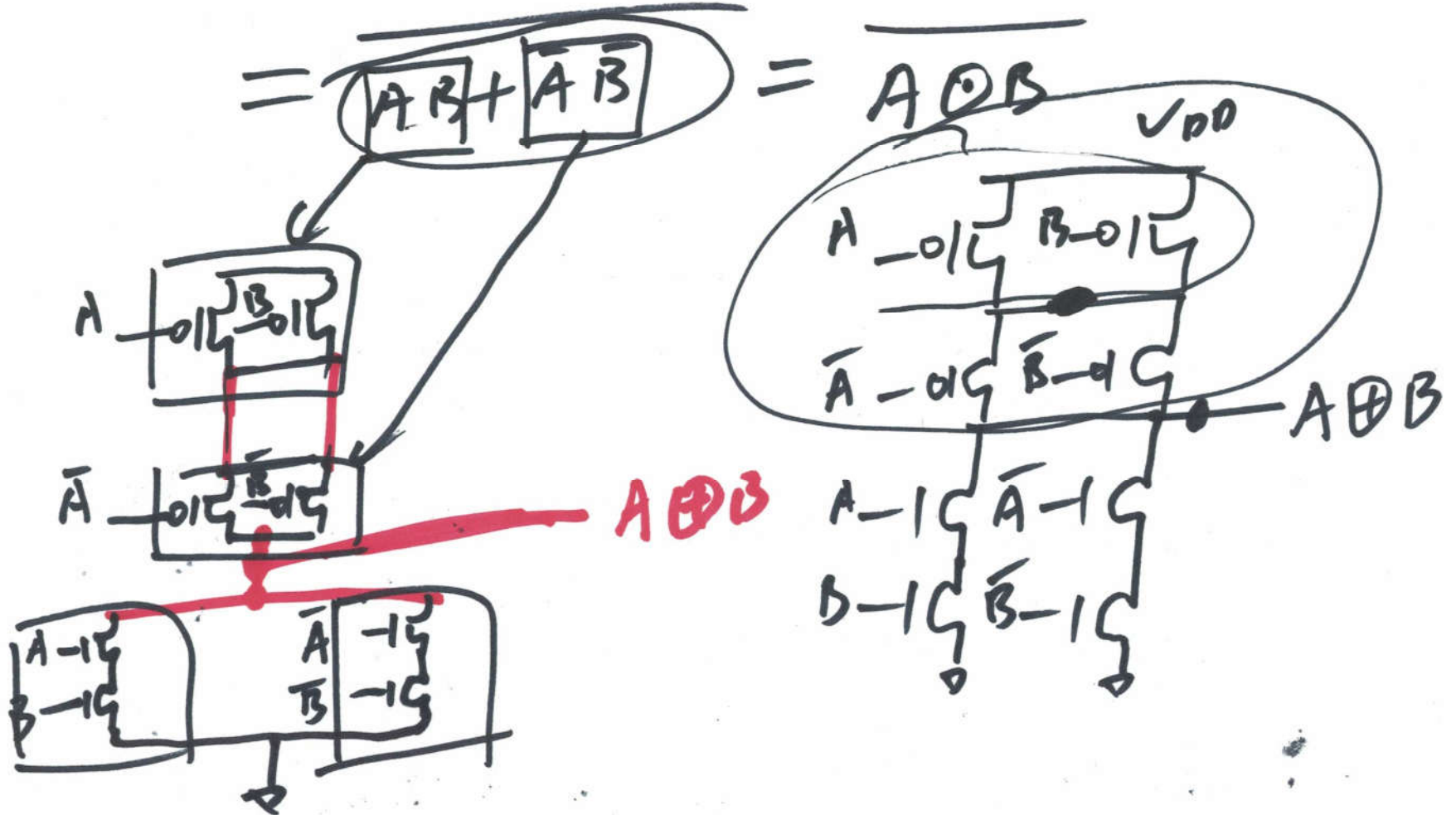
(2)

$$Y = \underline{\underline{\bar{A}B + A\bar{B}}} = \underline{\underline{\bar{A}B + A\bar{B}}}$$

$$= \overline{\bar{A}B} \cdot \overline{A\bar{B}} = (\bar{\bar{A}} + \bar{B}) \cdot (\bar{A} + \bar{\bar{B}})$$

$$= (A + \bar{B})(\bar{A} + B) = \cancel{A\bar{A}} + \bar{A}B + \bar{A}\bar{B} + \cancel{B\bar{B}}$$

$$= \boxed{\bar{A}B} + \boxed{\bar{A}\bar{B}} = \underline{\underline{A \oplus B}}$$



②

XOR Gate AOI Complex CMOS Logic Layout stick Diagram

