

1c. ABC F  $F = C + B(A + \bar{C})$

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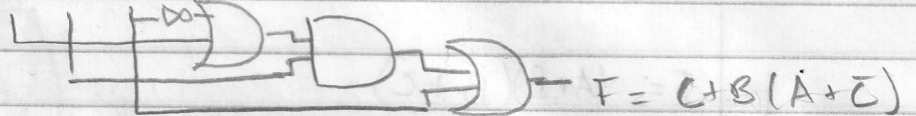
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A B C



2a.  $F = \bar{A}B + \bar{A}(B+C) + B(\bar{B}+\bar{C})$

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

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

$$= \bar{A}B + \bar{A}B + \bar{A}C + 0 + B\bar{C}$$

$$= \bar{A}B + \bar{A}B + \bar{A}C + 0$$

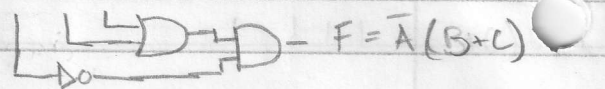
$$= B(\bar{A} + \bar{A}) + \bar{A}C + 0$$

$$= \bar{A}B + \bar{A}C + 0$$

$$= \bar{A}(B+C) + 0$$

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

A B C



2b.  $F = (\bar{A}\bar{B}(C+BD) + \bar{A}\bar{B})C$

$$= \bar{A}\bar{B}C(C+BD) + \bar{A}\bar{B}C$$

$$= \bar{A}\bar{B}CC + \bar{A}\bar{B}CBD + \bar{A}\bar{B}C$$

$$= \bar{A}\bar{B}C + \bar{A}\bar{B}C \cdot 0 + \bar{A}\bar{B}C$$

$$= \bar{A}\bar{B}C + 0 + \bar{A}\bar{B}C$$

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

$$= \bar{A}\bar{B}C(1)$$

$$= \bar{A}\bar{B}C$$

B C

