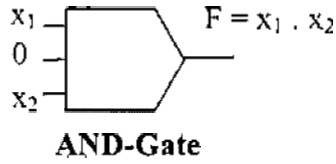
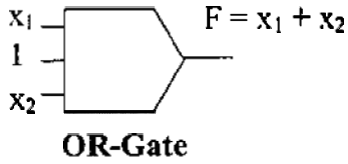


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Worksheet 8
EEL 4705
Emerging Logic Devices – AND/OR Mapping

Group #: 7

U IDs: [REDACTED]

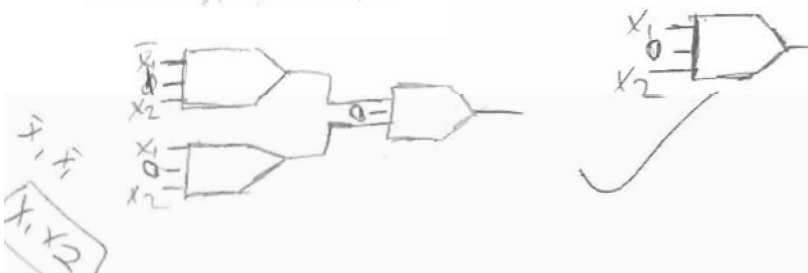


Question: Convert the following Boolean Logic expressions into equivalent Majority Gate Logic by using AND/OR mapping method demonstrated previously making use of the AND and OR forms as indicated above.

Use the method to first perform a direct AND/OR mapping of the expression. Then see if the expression can be further reduced to a simpler logic form and perform an AND OR mapping of the reduced expression.

Example: $n = x_1 \bar{x}_2 + \bar{x}_2 x_3$ can be further reduced to $n = (x_1 + x_3) \bar{x}_2$. Similarly, for all the equations below perform the AND/OR mapping for the original expression and the reduced form of the expression.

(a) $n = (\bar{x}_1 + x_2) \cdot (x_1 \cdot x_2)$



(b) $n = \bar{x}_1 \cdot x_3 + x_2 \cdot \bar{x}_3$

