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Assignment - 1

Q1 Solve the given problem using fundamental of Number Systems and Boolean algebra.

module 1

1) Explain de. morgan's theorem with truth table.

(1) Law 1: $\overline{A+B+C} = \overline{A} \cdot \overline{B} \cdot \overline{C}$

The complement of Sum of variable equal to complement of product of variable

A	B	C	A+B+C	$\overline{A+B+C}$	$\overline{A}$	$\overline{B}$	$\overline{C}$	$\overline{A} \cdot \overline{B} \cdot \overline{C}$
0	0	0	0	1	1	1	1	1
0	0	1	1	0	1	1	0	0
0	1	0	1	0	1	0	1	0
0	1	1	1	0	1	0	0	0
1	0	0	1	0	0	1	1	0
1	0	1	1	0	0	1	0	0
1	1	0	1	0	0	0	1	0
1	1	1	1	0	0	0	0	0

(2) Law 2: $\overline{A \cdot B \cdot C} = \overline{A} + \overline{B} + \overline{C}$

the Complement of product is equal to. Complement of Sum of variable