

Minterm and Maxterm Expressions

For the truth table below, expression the minterm sum or products equation, and express the maxterm product of sums expression.

A	B	C	$F_{(A,B,C)}$
0	0	0	1
1	0	0	0
0	1	0	1
1	1	0	0
0	0	1	0
1	0	1	1
0	1	1	1
1	1	1	0

$$\text{SOP (minterms)} = \overline{A}\overline{B}\overline{C} + \overline{A}B\overline{C} + A\overline{B}C + \overline{A}BC$$

$$\text{POS (maxterms)} = (\overline{A} + B + C)(\overline{A} + \overline{B} + C)(A + B + \overline{C})(\overline{A} + \overline{B} + \overline{C})$$