

Answer on Question #43376 – Math - Discrete Mathematics

Simplify the following Boolean function using k-map
 $F = A'C + A'B + AB'C + BC$

Solution.

Truth table of a function:

	<i>A</i>	<i>B</i>	<i>C</i>	<i>F</i>
0	0	0	0	0
1	0	0	1	1
2	0	1	0	1
3	0	1	1	1
4	1	0	0	0
5	1	0	1	1
6	1	1	0	0
7	1	1	1	1

Hence, $F = \sum m(1,2,3,5,7) = A'B'C + A'BC' + A'BC + AB'C + ABC$.

Answer: $F = A'B'C + A'BC' + A'BC + AB'C + ABC$.