

DSAIUebung-003 -- Karnaugh-Veitch Method

a) - Create Truth Tables

b) - Optimize the Boolean expression using the Karnaugh-Veitch method

1) [3 Variables]

A	B	C	P(A,B,C)
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	0

	AB	A¬B	¬A¬B	¬AB
C	0	0	0	1
¬C	0	0	1	1

$$P(A,B,C) \equiv \neg A \neg C \vee \neg AB$$

2) [4 Variables]

A	B	C	D	P(A,B,C,D)
1	0	0	0	1
0	1	1	1	0
1	1	0	1	1
0	1	0	1	1
1	1	0	0	1
1	0	1	0	0
1	0	0	1	1

	AB	A¬B	¬A¬B	¬AB
CD	0	0	0	0
C¬D	0	0	0	0
¬C¬D	1	1	0	0
¬CD	1	1	0	1

$P(A,B,C,D) \equiv A \neg C \vee \neg CD$
