

$S_1$

$B$

$A$

$AB$

00 01 11 10

$CD$

00 01 11 10

$D$

$C$

00	0	0	0	0
01	1	0	0	0
11	0	0	0	0
10	1	0	0	0

0000 0100 1100 1000

0001 0101 1101 1001

0011 0111 1111 1011

0010 0110 1110 1010

$$S_1 = \underline{\overline{A}\overline{B}\overline{C}D} + \underline{\overline{A}\overline{B}C\overline{D}}$$