

$$10011110 = 01100001 = -(1 + 32 + 64) = -97$$

$$11100110 = 00011001 = -25$$

AB \ CD	00	01	11	10
00		1	1	
01	1			
11	1			
10	1	1	1	1

0	4	12	8
1	5	13	9
3	7	15	11
2	6	14	10

$$\text{SOP} \oplus [2, 6, 14, 10] = \overline{CD}$$

$$\textcircled{2} [1, 3] = \overline{A} \overline{B} D$$

$$\textcircled{3} [6, 14, 4, 12] = B \overline{D}$$

$$\text{SOP} = \overline{CD} + \overline{A} \overline{B} D + B \overline{D}$$

AB \ CD	00	01	11	10
00	0			0
01	0	0	0	0
11	0	0	0	0
10				

$$\textcircled{1} \overline{B} + \overline{D}$$

$$\textcircled{2} \overline{A} + \overline{D}$$

$$\textcircled{3} B + C + D$$

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