1. $f = x_3 \bar{x}_2 x_1 + x_3 x_1 + (x_3 + \bar{x}_2 + x_1) + (x_3 + \bar{x}_2 + \bar{x}_1)$

x_1x_0 \ x_3x_2	00	01	11	10
00	0	0	0	0
01	0	0	0	0
11	0	0	1	1
10	0	0	1	1

$f_1 = x_3 x_1$

+

x_1x_0 \ x_3x_2	00	01	11	10
00	1	0	1	1
01	1	0	1	1
11	1	0	1	1
10	1	0	1	1

$f_2 = x_3 \bar{x}_2$

$\therefore f = f_1 + f_2 = x_3 x_1 + x_3 \bar{x}_2$

$\Rightarrow$