

PS

$$\begin{array}{l|l|l|l|l} 0=0 & 3=2 & 6=5 & 9=13 & 12=10 \\ 1=1 & 4=6 & 7=4 & 10=15 & 13=11 \\ 2=3 & 5=7 & 8=12 & 11=14 & 14=9 \\ & & & 15=8 & \end{array}$$

$$P = \Sigma_4(0, 1, 2, 3)$$

$$S = \Sigma_4(4, 5, 6, 7)$$

$$T = \Sigma_4(8, 9, 10, 11)$$

$$C = \Sigma_4(12, 13, 14, 15)$$

	$G_3$	$G_2$	$G_1$	$G_0$	$\bar{P}_3$	$\bar{P}_2$	$\bar{P}_1$	$\bar{P}_0$
P { 0	0	0	0	0	0	0	0	0
1	0	0	0	1	0	0	0	1
2	0	0	1	1	0	0	1	0
3	0	0	1	0	0	0	1	1
S { 4	0	1	1	0	0	1	0	0
5	0	1	1	1	0	1	0	1
6	0	1	0	1	0	1	1	0
7	0	1	0	0	0	1	1	1
T { 8	1	1	0	0	1	0	0	0
9	1	1	0	1	1	0	0	1
10	1	1	1	1	1	0	1	0
11	1	1	1	0	1	0	1	1
C { 12	1	0	1	0	1	1	0	0
13	1	0	1	1	1	1	0	1
14	1	0	0	1	1	1	1	0
15	1	0	0	0	1	1	1	1

$$\bar{P}_0 = \Sigma_4(1, 3, 5, 7, 9, 11, 13, 15)$$

$$\bar{P}_1 = \Sigma_4(2, 3, 6, 7, 10, 11, 14, 15)$$

$$\bar{P}_2 = \Sigma_4(4, 5, 6, 7, 12, 13, 14, 15)$$

$$\bar{P}_3 = \Sigma_4(8, 9, 10, 11, 12, 13, 14, 15)$$

ab \ cd	00	01	11	10
00				
01	1 <sub>8</sub>	1 <sub>10</sub>	1 <sub>11</sub>	1 <sub>9</sub>
11	1 <sub>12</sub>	1 <sub>14</sub>	1 <sub>15</sub>	1 <sub>13</sub>
10				

$$\bar{P}_3 = d$$

$$\bar{P}_3 = G_3$$

ab \ cd	00	01	11	10
00				
01	1 <sub>8</sub>	1 <sub>10</sub>	1 <sub>11</sub>	1 <sub>9</sub>
11	1 <sub>12</sub>	1 <sub>14</sub>	1 <sub>15</sub>	1 <sub>13</sub>
10	1 <sub>4</sub>	1 <sub>6</sub>	1 <sub>7</sub>	1 <sub>5</sub>

$$\bar{P}_2 = G_3 \bar{G}_2 + \bar{G}_3 G_2$$

ab \ cd	00	01	11	10
00		1 <sub>2</sub>	1 <sub>3</sub>	
01	1 <sub>8</sub>		1 <sub>10</sub>	1 <sub>9</sub>
11	1 <sub>12</sub>	1 <sub>14</sub>	1 <sub>15</sub>	1 <sub>13</sub>
10	1 <sub>4</sub>		1 <sub>7</sub>	1 <sub>5</sub>

$$\bar{P}_1 = \bar{G}_3 \bar{G}_2 G_1 + G_3 \bar{G}_2 \bar{G}_1 + G_3 G_2 G_1 + \bar{G}_3 G_2 \bar{G}_1$$

ab \ cd	00	01	11	10
00		<del>0</del>		1
01	1		1	
11		1		1
10	1		1	

$$Q_0 = \bar{G}_3 \bar{G}_2 G_1 \bar{G}_0 + \bar{G}_3 \bar{G}_2 \bar{G}_1 G_0 + \bar{G}_3 \bar{G}_2 \bar{G}_1 \bar{G}_0 + \bar{G}_3 \bar{G}_2 G_1 G_0 + G_3 G_2 G_1 \bar{G}_0 + G_3 G_2 \bar{G}_1 G_0 + \bar{G}_3 G_2 \bar{G}_1 \bar{G}_0 + \bar{G}_3 G_2 G_1 G_0$$