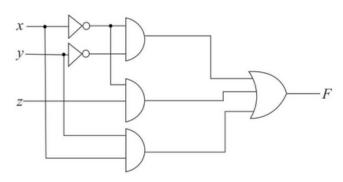
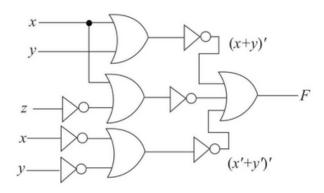
2.14 (a) F = x'y' + x'z + xy



(b) F = x'y' + x'z + xy = (x + y)' + (x + z')' + (x' + y')'



- **2.20** (a) $F(A, B, C, D) = \Sigma(0, 3, 5, 7, 9, 11, 13)$ $F'(A, B, C, D) = \Sigma(1, 2, 4, 6, 8, 10, 12, 14, 15)$
 - (b) $F(x, y, z) = \pi(2, 4, 6, 7)$ $F'(x, y, z) = \Sigma(2, 4, 6, 7)$

(a)
$$F(x, y, z) = xyz + x'y + xyz'$$
$$= xyz + x'yz + x'yz' + xyz'$$
$$= \Sigma(2, 3, 6, 7)$$

v^2				
x	00	01	11	10
0	0	0	1	1
1	0	0	1	1
F	= v			

(b)
$$F(x, y, z) = x'yz + xyz' + xyz + x'yz' + xy'z'$$
$$= \Sigma(2, 3, 4, 6, 7)$$

$\sqrt{v^2}$							
x	00	01	11	10			
0	0	0	1	1			
1	1	0	1	1			
F = y + xz'							

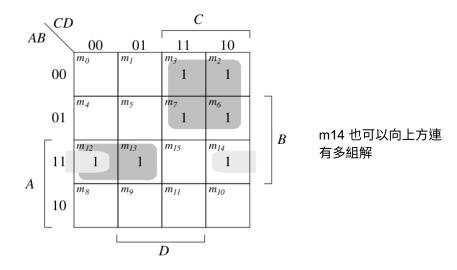
3.5

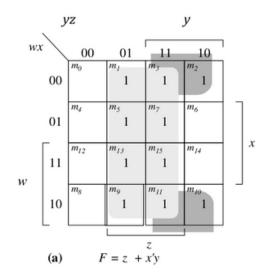
(a)
$$F(w, x, y, z) = \Sigma(0, 4, 6, 8, 14, 15)$$

wx yz								
ma \	00	01	11	10				
00	1	0	0	0				
01	1	0	0	1				
11	0	0	1	1				
10	1	0	0	0				

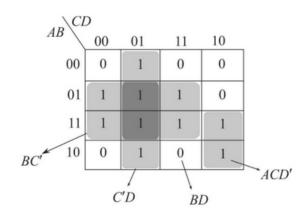
$$F = w'xz' + x'y'z' + wxy$$

$(\mathbf{b})F = \mathbf{A'C+ABC'+ABD'}$ or $\mathbf{A'C+ABC'+BCD'}$





(b) ACD' + B'C'D + BCD + BC'= $\Sigma(1, 4, 5, 7, 9, 10, 12, 13, 14, 15)$



F = BC' + BD + C'D + ACD'