

# CHƯƠNG IV.

⑦.

$$A_1 = \{5, 7, 11, 13\}$$

$$A_2 = \{5, 7, 10, 14\}$$

$$A_3 = \{6, 9, 12, 15\}$$

$$A_4 = \{8, 9\}$$

$$A_5 = \{9, 10, 11, 12\}$$

$$A_6 = \{5, 6, 13, 14, 15\}$$

	$A_1$	$A_2$	$A_3$	$A_4$	$A_5$	$A_6$	
5	x	x				x	<del><math>a_1 \vee a_2 \vee a_6 = 1</math></del>
6			x			x	$a_3 \vee a_6 = 1$
7	x	x					$a_1 \vee a_2 = 1$
8				x			$a_4 = 1$
9			x	x	x		<del><math>a_3 \vee a_4 \vee a_5 = 1</math></del>
10		x			x		$a_2 \vee a_5 = 1$
11	x				x		$a_1 \vee a_5 = 1$
12			x		x		$a_3 \vee a_5 = 1$
13	x					x	$a_1 \vee a_6 = 1$
14		x				x	$a_2 \vee a_6 = 1$
15			x			x	$a_3 \vee a_6 = 1$

$$1 = (a_3 \vee a_6) (a_1 \vee a_2) a_4 (a_2 \vee a_5) (a_1 \vee a_5) (a_3 \vee a_5) (a_1 \vee a_6) (a_2 \vee a_6) (a_3 \vee a_6)$$

$$\Leftrightarrow 1 = [a_6 \vee (a_1 a_2 a_3)] [a_5 \vee (a_1 a_2 a_3)] a_4 (a_1 \vee a_2)$$

$$\Leftrightarrow 1 = [(a_1 a_2 a_3) \vee (a_5 a_6)] a_4 (a_1 \vee a_2)$$

$$\Leftrightarrow 1 = (a_1 a_2 a_3 a_4) \vee (a_4 a_5 a_6) (a_1 \vee a_2)$$

$$\Leftrightarrow 1 = (a_1 a_2 a_3 a_4) \vee (a_1 a_4 a_5 a_6) \vee (a_2 a_4 a_5 a_6)$$

$$\Leftrightarrow \begin{cases} a_1 a_2 a_3 a_4 = 1 \\ a_1 a_4 a_5 a_6 = 1 \\ a_2 a_4 a_5 a_6 = 1 \end{cases}$$

$a_1$	$a_2$	$a_3$	$a_4$	$a_5$	$a_6$	Phủ rồi nối
1	1	1	1			$A_1 A_2 A_3 A_4$
1			1	1	1	$A_1 A_4 A_5 A_6$
	1		1	1	1	$A_2 A_4 A_5 A_6$

$$12 \quad \begin{cases} a \vee \bar{a}y = 0 & (1) \end{cases}$$

$$\begin{cases} \bar{a}y = \bar{a}z & (2) \quad (4) \end{cases}$$

$$\bar{a}y \vee \bar{a}\bar{z} \vee zw = \bar{z}w. \quad (3)$$

$$a) \quad a \vee \bar{a}y = 0 \Leftrightarrow \bar{a} \cdot (a \vee \bar{y}) = 1$$

$$\Leftrightarrow \bar{a}\bar{y} = 1$$

$$(2) \bar{a}y = \bar{a}z \Leftrightarrow \bar{a}y \cdot \bar{a}z \vee (a \vee \bar{y}) \cdot (a \vee \bar{z}) = 1$$

$$\Leftrightarrow \bar{a}yz \vee a \vee \bar{a}\bar{z} \vee a\bar{y} \vee \bar{y}\bar{z} = 1$$

$$\Leftrightarrow \bar{a}yz \vee a \vee \bar{y}\bar{z} = 1$$

$$(3) \bar{a}y \vee \bar{a}\bar{z} \vee zw = \bar{z}w.$$

$$\Leftrightarrow (\bar{a}y \vee \bar{a}\bar{z} \vee zw) \cdot \bar{z}w \vee (a \vee \bar{y}) \cdot (a \vee \bar{z}) \cdot (\bar{z} \vee \bar{w}) \cdot (z \vee \bar{w}) = 1$$

$$\Leftrightarrow \cancel{\bar{a}yzw} \vee \cancel{\bar{a}\bar{z}\bar{w}} \vee \cancel{a\bar{z}\bar{w}} \vee \cancel{a\bar{z}\bar{w}} \vee a\bar{w} \vee \cancel{a\bar{z}\bar{w}} \vee \cancel{a\bar{y}\bar{z}\bar{w}} \vee \cancel{a\bar{y}\bar{z}\bar{w}} \vee \cancel{a\bar{y}\bar{w}} \vee \bar{y}z\bar{w} \vee \bar{y}\bar{z}\bar{w} = 1$$

$$\Leftrightarrow \bar{a}\bar{z}\bar{w} \vee a\bar{w} \vee \bar{y}z\bar{w} = 1$$

$$(4) \Leftrightarrow \begin{cases} \bar{a}\bar{y} = 1 \\ \bar{a}yz \vee a \vee \bar{y}\bar{z} = 1 \\ \bar{a}\bar{z}\bar{w} \vee a\bar{w} \vee \bar{y}z\bar{w} = 1 \end{cases}$$

$$\Leftrightarrow \bar{a}\bar{y} (\bar{a}yz \vee a \vee \bar{y}\bar{z}) (\bar{a}\bar{z}\bar{w} \vee a\bar{w} \vee \bar{y}z\bar{w}) = 1$$

$$\Leftrightarrow \bar{a}\bar{y}\bar{z} (\bar{a}\bar{z}\bar{w} \vee a\bar{w} \vee \bar{y}z\bar{w}) = 1$$

$$\Leftrightarrow \bar{a}\bar{y}\bar{z}\bar{w} = 1$$

a	y	z	w
0	0	0	1