

$y_2 y_1$		00	01	11	10
w	0	0	0	d	0
	1	1	0	d	0

$y_2 y_1$		00	01	11	10
w	0	0	0	d	0
	1	0	1	d	1

$y_2 y_1$		0	1
y_2	0	0	0
	1	1	d

Ignoring don't cares

$$Y_1 = w\bar{y}_1\bar{y}_2$$

$$Y_2 = wy_1\bar{y}_2 + w\bar{y}_1y_2$$

$$z = \bar{y}_1y_2$$

Using don't cares

$$Y_1 = w\bar{y}_1\bar{y}_2$$

$$\begin{aligned} Y_2 &= wy_1 + wy_2 \\ &= w(y_1 + y_2) \end{aligned}$$

$$z = y_2$$

Figure 6.7 Derivation of logic expressions for the table in Figure 6.6.