

QMC₁

$$\begin{array}{c} X_0 \ X_1 \ X_2 \ X_3 \\ \begin{array}{|c|c|c|c|} \hline F & F & F & F \\ \hline F & F & T & T \\ \hline F & T & T & F \\ \hline F & T & T & T \\ \hline T & F & F & T \\ \hline T & F & T & T \\ \hline T & T & F & F \\ \hline T & T & T & F \\ \hline \end{array} \end{array}$$

⇒

$$\begin{array}{|c|c|c|c|} \hline F & X & T & T \\ \hline X & F & T & T \\ \hline F & T & T & X \\ \hline X & T & T & F \\ \hline T & F & X & T \\ \hline T & T & X & F \\ \hline F & F & F & F \\ \hline \end{array}$$

Problem 8.1

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QMC₂

	FFFF	FFTT	FTTF	FTTT	TFFT	TFTT	TTFF	TTTF
$\bar{X}_0 X_2 X_3$	F	⊕	F	⊕	F	F	F	F
$\bar{X}_1 X_2 X_3$	F	⊕	F	F	F	⊕	F	F
$\bar{X}_0 X_1 X_2$	F	F	⊕	⊕	F	F	F	F
$X_1 X_2 \bar{X}_3$	F	F	⊕	F	F	F	F	⊕
$X_0 \bar{X}_1 X_3$	F	F	F	F	⊕	⊕	F	F
$X_0 X_1 \bar{X}_3$	F	F	F	F	F	F	⊕	⊕
$\bar{X}_0 \bar{X}_1 \bar{X}_2 \bar{X}_3$	⊕	F	F	F	F	F	F	F

 $\bar{X}_0 X_2 X_3$ and $X_1 X_2 \bar{X}_3$ are not essential.

minimal polynomial : $\bar{X}_1 X_2 X_3 + \bar{X}_0 X_1 X_2 + X_0 \bar{X}_1 X_3 +$
 $X_0 X_1 \bar{X}_3 + \bar{X}_0 \bar{X}_1 \bar{X}_2 \bar{X}_3$