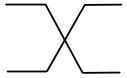
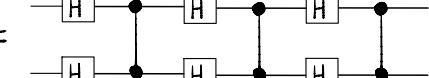
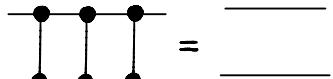
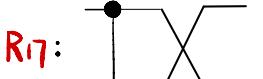
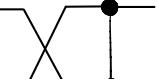
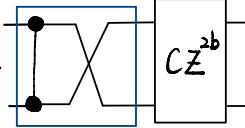


Def 3:  := 

C₆:  **R₁₇:**  = 

Lem 1 By Def 3, **C₆** & **R₁₇**, 23. (1)

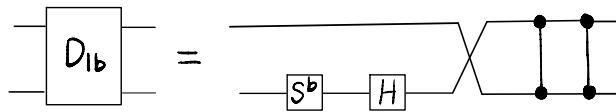
$$\begin{aligned}
 (1) \quad & \boxed{\text{D}_{00}} = \boxed{\text{D}_{02}} \\
 (2) \quad & \boxed{\text{D}_{01}} = \boxed{\text{D}_{00}} \\
 (3) \quad & \boxed{\text{D}_{02}} = \boxed{\text{D}_{01}}
 \end{aligned}$$

Proof: 23. (1) / (2) / (3). LHS = 

$$\begin{aligned}
 \stackrel{\text{R17}}{=} & \quad \text{CZ}^{2b+4} = \text{CZ}^{2b+4} = \text{CZ}^{2(b+2)}
 \end{aligned}$$

$$\stackrel{\text{C}_6}{=} \quad \text{CZ}^{2(b+2)}$$

$$\stackrel{\text{def}}{=} \quad \boxed{D_{0,b+2}} = 23. (1) / (2) / (3). \text{RHS}$$



Def 3:

$C_7: (1)$ $=$

(2) $=$

R_{17} : $=$

$R_{18}: (1)$ $=$

(2) $=$

$R_{19}: (1)$ $=$

(2) $=$

$C_3: S^3 = I$

$R_{28}:$ $\cdot w$

Lem 2 By Def 3, R_{17} , R_{18} ,
 R_{19} , R_{28} , C_3 , C_7 ,

23. (4) $=$ $\cdot w$

(5) $=$ $\cdot w$

(6) $=$ $\cdot w$

Proof: 23.(4)/(5)/(6). LHS := $\stackrel{C_7}{=}$ $\cdot w$

$\stackrel{R_{17}}{=} \stackrel{R_{19}}{=}$

$\stackrel{R_{28}}{=}$ $\cdot w$

$\stackrel{R_{18}, R_{19}}{=} \stackrel{C_3}{=}$ $\cdot w$

$\stackrel{\text{def}}{=} \boxed{D_{1,b+2}}$ $\cdot w =: 23.(4)/(5)/(6). \text{ RHS.}$

$$D_{2b} = \begin{array}{c} \text{Circuit Diagram} \end{array}$$

$$\text{Def 3: } \begin{array}{c} \text{Circuit Diagram} \end{array} := \begin{array}{c} \text{Circuit Diagram} \end{array}$$

$$C_7 : (1) \begin{array}{c} \text{Circuit Diagram} \end{array} = \begin{array}{c} \text{Circuit Diagram} \end{array} \quad (2) \begin{array}{c} \text{Circuit Diagram} \end{array} = \begin{array}{c} \text{Circuit Diagram} \end{array}$$

$$R_{18} : (1) \begin{array}{c} \text{Circuit Diagram} \end{array} = \begin{array}{c} \text{Circuit Diagram} \end{array} \quad (2) \begin{array}{c} \text{Circuit Diagram} \end{array} = \begin{array}{c} \text{Circuit Diagram} \end{array}$$

$$R_{19} : (1) \begin{array}{c} \text{Circuit Diagram} \end{array} = \begin{array}{c} \text{Circuit Diagram} \end{array} \quad (2) \begin{array}{c} \text{Circuit Diagram} \end{array} = \begin{array}{c} \text{Circuit Diagram} \end{array}$$

$$R_{28}: \begin{array}{c} \text{Circuit Diagram} \end{array} = \begin{array}{c} \text{Circuit Diagram} \end{array} \cdot w$$

$$C_2 : H^4 = I \quad C_3 : S^3 = I$$

$$C_8 : (1) \begin{array}{c} \text{Circuit Diagram} \end{array} = \begin{array}{c} \text{Circuit Diagram} \end{array}$$

$$(2) \begin{array}{c} \text{Circuit Diagram} \end{array} = \begin{array}{c} \text{Circuit Diagram} \end{array}$$

$$R_3 : SZ = ZS$$

$$C_8^1 : (1) \begin{array}{c} \text{Circuit Diagram} \end{array} = \begin{array}{c} \text{Circuit Diagram} \end{array}$$

$$(2) \begin{array}{c} \text{Circuit Diagram} \end{array} = \begin{array}{c} \text{Circuit Diagram} \end{array}$$

Lem 3 By Def 3, C₂, C₃, C₇, C₈, R₃,

R₁₇, R₁₈, R₁₉ & R₂₈,

$$23. (7) \begin{array}{c} \text{Circuit Diagram} \end{array} = \begin{array}{c} \text{Circuit Diagram} \end{array} \cdot w^2$$

$$(8) \begin{array}{c} \text{Circuit Diagram} \end{array} = \begin{array}{c} \text{Circuit Diagram} \end{array} \cdot w^2$$

$$(9) \begin{array}{c} \text{Circuit Diagram} \end{array} = \begin{array}{c} \text{Circuit Diagram} \end{array} \cdot w^2$$

Proof: 23.(7)/(8)/(9). LHS =

$$\begin{array}{c} \text{Circuit Diagram} \end{array} = \begin{array}{c} \text{Circuit Diagram} \end{array} \stackrel{C_8}{=} \begin{array}{c} \text{Circuit Diagram} \end{array}$$

$$\stackrel{C_7}{=} \begin{array}{c} \text{Circuit Diagram} \end{array} \stackrel{R_{17}}{\stackrel{R_{19}}{=}} \begin{array}{c} \text{Circuit Diagram} \end{array}$$

$$\stackrel{R_{28}}{=} \begin{array}{c} \text{Circuit Diagram} \end{array} \cdot w$$

$$\stackrel{G_3, G_7}{\stackrel{R_{18}}{=}} \begin{array}{c} \text{Circuit Diagram} \end{array} \cdot w$$

$$\stackrel{R_{28}}{=} \begin{array}{c} \text{Circuit Diagram} \end{array} \cdot w \cdot w$$

$$\stackrel{G_3, G_7, R_3}{\stackrel{R_{18}, R_{19}}{=}} \begin{array}{c} \text{Circuit Diagram} \end{array} \stackrel{D_{01}}{\stackrel{A_{2,b+2}}{=}} \begin{array}{c} \text{Circuit Diagram} \end{array} \cdot w^2$$

$$S^{2b+2} S^2 = S^{2b+4} = S^{2(b+2)}$$

$$\stackrel{G_3}{\stackrel{R_3}{=}} \begin{array}{c} \text{Circuit Diagram} \end{array} \cdot w^2$$

$$\stackrel{\text{def}}{=} \begin{array}{c} \text{Circuit Diagram} \end{array} \cdot w^2 = 23.(7)/(8)/(9).\text{RHS}$$

□

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