

$$(1 \cong 0) \cong (1 \wedge 0 \wedge 0_{XY} \forall X, Y \in Ob(C))$$

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$$\begin{aligned}
& (1 \cong 0) \Rightarrow \\
& \forall X, Y \in Ob(C) \exists ! 1^X \in X \rightarrow 1 \wedge \\
& \exists ! Y^0 \in 0 \rightarrow Y \Rightarrow \\
& \exists ! 0_{XY} \in X \rightarrow Y = Y^0 \cdot 0^1 \cdot 1^X \quad \text{(to)} \\
& (1 \wedge 0 \wedge 0_{XY} \forall X, Y \in Ob(C)) \Rightarrow \\
& (\forall X, Y \in Ob(C) \exists ! 0_{XY} \in X \rightarrow Y \Rightarrow \\
& (0_{10} \in 1 \rightarrow 0 \wedge \\
& \forall Z \in Ob(C) \exists ! Z^0 \in 0 \rightarrow Z \wedge \\
& \forall Q \in Ob(C) \exists ! 1^Q \in Q \rightarrow 1) \Rightarrow \\
& 0_{10} \cdot 1^0 = 0^0 = 1_0 \wedge \\
& 1^0 \cdot 0_{10} = 1^1 = 1_1 \Rightarrow \\
& (1 \cong 0) \quad \text{(from)}
\end{aligned}$$