

t126_xboolean (TMM-
FUL9NCTrvVmVD6f4b88eLWYceFEuVuWZ)

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Let $v1_xboolean : \iota \Rightarrow o$ be given. Let $k7_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboolean : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xboolean X0) \Rightarrow (\forall X1.(v1_xboolean X1) \Rightarrow (\forall X2. \\ & (v1_xboolean X2) \Rightarrow (k7_xboolean (k7_xboolean X0 X1) X2 = k7_xboolean \\ & X0 (k7_xboolean X1 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(v1_xboolean X0) \Rightarrow (k7_xboolean X0 X0 = k2_xboolean) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xboolean X0) \wedge (v1_xboolean X1)) \Rightarrow (v1_xboolean (k7_xboolean X0 X1)) \tag{3}$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xboolean X0) \Rightarrow (\forall X1.(v1_xboolean X1) \Rightarrow (\forall X2. \\ & (v1_xboolean X2) \Rightarrow (k7_xboolean (k7_xboolean (k7_xboolean (k7_xboolean \\ & X0 X1) X2) X0) (k7_xboolean X1 X2) = k2_xboolean))) \end{aligned}$$