

t77_xboolean
 (TMVH4MFVecpTtHWxFB7nREiVBUBVRANqide)

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Let $v1_xboolean : \iota \Rightarrow o$ be given. Let $k10_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboolean : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xboolean X0) \Rightarrow (\forall X1.(v1_xboolean X1) \Rightarrow (k4_xboolean X0 (k10_xboolean X0 X1) = k4_xboolean X0 (k3_xboolean X1))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xboolean X0) \Rightarrow (\forall X1.(v1_xboolean X1) \Rightarrow (\forall X2.(v1_xboolean X2) \Rightarrow (k4_xboolean X0 (k10_xboolean X1 X2) = k10_xboolean (k4_xboolean X0 X1) (k4_xboolean X0 X2)))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xboolean X0) \wedge (v1_xboolean X1)) \Rightarrow (k4_xboolean X0 X0 = X0) \quad (3)$$

Theorem 1

$$\forall X0.(v1_xboolean X0) \Rightarrow (\forall X1.(v1_xboolean X1) \Rightarrow (k10_xboolean X0 (k4_xboolean X0 X1) = k4_xboolean X0 (k3_xboolean X1)))$$