

t103_xboolean
(TMQ3nkqRjYUn6Z8mTaZ9MfXXgtg33fryGj6)

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Let $v1_xboolean : \iota \Rightarrow o$ be given. Let $k6_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboolean : \iota$ be given. Let $k3_xboolean : \iota \Rightarrow \iota$ be given. Let $k4_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Assume the following.

$$\forall X0.(v1_xboolean X0) \Rightarrow (k3_xboolean (k4_xboolean X0 (k3_xboolean X0)) = k2_xboolean) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xboolean X0) \Rightarrow (v1_xboolean (k3_xboolean X0)) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xboolean X0) \Rightarrow (\forall X1.(v1_xboolean X1) \Rightarrow (k6_xboolean X0 X1 = k5_xboolean (k3_xboolean X0) X1)) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xboolean X0) \Rightarrow (\forall X1.(v1_xboolean X1) \Rightarrow (k5_xboolean X0 X1 = k3_xboolean (k4_xboolean (k3_xboolean X0) (k3_xboolean X1)))) \quad (4)$$

Assume the following.

$$k2_xboolean = np_1 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xboolean X0) \wedge (v1_xboolean X1)) \Rightarrow (k5_xboolean X0 X1 = k5_xboolean X1 X0) \quad (6)$$

Theorem 1 $\forall X0.(v1_xboolean X0) \Rightarrow (k6_xboolean X0 X0 = k2_xboolean)$.