

t116_xboolean (TMUKQQtNHCEqK6bxjR2FgjVeKw71Ci8mnWY)

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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 $k4_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Assume the following.

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

Assume the following.

$$\forall X0.(v1_xboolean\ X0) \Rightarrow (\forall X1.(v1_xboolean\ X1) \Rightarrow (k4_xboolean\ X0\ (k6_xboolean\ X0\ X1) = k4_xboolean\ X0\ X1)) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xboolean\ X0) \Rightarrow (k6_xboolean\ X0\ X0 = k2_xboolean) \quad (3)$$

Assume the following.

$$k2_xboolean = np_1 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xboolean\ X0) \wedge (v1_xboolean\ X1)) \Rightarrow (k4_xboolean\ X0\ X1 = k4_xboolean\ X1\ X0) \quad (5)$$

Theorem 1

$$\forall X0.(v1_xboolean\ X0) \Rightarrow (\forall X1.(v1_xboolean\ X1) \Rightarrow ((k6_xboolean\ X0\ X1 = k2_xboolean) \wedge (k6_xboolean\ X1\ X0 = k2_xboolean)) \Rightarrow (X0 = X1)))$$