

t41_xboolean (TMSFaH-
MQznDjs93baGvonwSBhkGFwnizDGJ)

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Let $v1_xboolean : \iota \Rightarrow o$ be given. Let $k4_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboolean : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_xcmplx_0 X0) \wedge ((v1_xcmplx_0 X1) \wedge (v1_xcmplx_0 X2))) \Rightarrow (k3_xcmplx_0 (k3_xcmplx_0 X0 X1) X2 = k3_xcmplx_0 X0 (k3_xcmplx_0 X1 X2)) \quad (1)$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. ((v1_xboolean X0) \wedge (v1_xboolean X1)) \Rightarrow (v1_xboolean (k9_xboolean X0 X1)) \quad (4)$$

Assume the following.

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

Assume the following.

$$\forall X0. (v1_xboolean X0) \Rightarrow (\forall X1. (v1_xboolean X1) \Rightarrow (k5_xboolean X0 X1 = k3_xboolean (k4_xboolean (k3_xboolean X0) (k3_xboolean X1)))) \quad (6)$$

Assume the following.

$$\forall X0. (v1_xboolean X0) \Rightarrow (\forall X1. (v1_xboolean X1) \Rightarrow (k4_xboolean X0 X1 = k3_xcmplx_0 X0 X1)) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xboolean\ X0) \Rightarrow (\forall X1.(v1_xboolean\ X1) \Rightarrow (k9_xboolean\ X0\ X1 = k3_xboolean\ (k5_xboolean\ X0\ X1))) \quad (8)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (v1_xcmplx_0\ X0) \quad (9)$$

Assume the following.

$$\forall X0.(v1_xboolean\ X0) \Rightarrow (v7_ordinal1\ X0) \quad (10)$$

Theorem 1

$$\forall X0.(v1_xboolean\ X0) \Rightarrow (\forall X1.(v1_xboolean\ X1) \Rightarrow (\forall X2.(v1_xboolean\ X2) \Rightarrow (k4_xboolean\ X0\ (k9_xboolean\ X1\ X2) = k4_xboolean\ (k4_xboolean\ X0\ (k3_xboolean\ X1))\ (k3_xboolean\ X2))))$$