

t75_xboolean
(TMR6tuUvXbUhC9QZPq56gV67WJtDAr244qJ)

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Let $v1_xboolean : \iota \Rightarrow o$ be given. Let $k4_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k5_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k3_xboolean : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_0 : \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboolean : \iota$ be given. Let $k1_xboolean : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xboolean X0) \Rightarrow (\forall X1.(v1_xboolean X1) \Rightarrow (k5_xboolean X0 (k4_xboolean X0 X1) = X0)) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xboolean X0) \Rightarrow (\forall X1.(v1_xboolean X1) \Rightarrow (k7_xboolean X0 X1 = k5_xboolean (k4_xboolean X0 X1) (k9_xboolean X0 X1))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 np_1 X0 = X0) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xboolean X0) \Rightarrow (\forall X1.(v1_xboolean X1) \Rightarrow (k9_xboolean X0 (k4_xboolean X0 X1) = k3_xboolean X0)) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 k6_numbers = k6_numbers) \quad (6)$$

Assume the following.

$$v1_xboole_0 np_0 \quad (7)$$

Assume the following.

$$k3_xcmplx_0 \ np_0 \ np_1 = np_0 \quad (8)$$

Assume the following.

$$k3_xcmplx_0 \ np_0 \ np_0 = np_0 \quad (9)$$

Assume the following.

$$k6_xcmplx_0 \ np_1 \ np_0 = np_1 \quad (10)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (11)$$

Assume the following.

$$\forall X0.(v1_xboolean \ X0) \Rightarrow (k3_xboolean \ (k3_xboolean \ X0) = X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xboolean \ X0) \wedge (v1_xboolean \ X1)) \Rightarrow (v1_xboolean \ (k10_xboolean \ X0 \ X1)) \quad (13)$$

Assume the following.

$$v1_xboolean \ k2_xboolean \quad (14)$$

Assume the following.

$$v1_xboolean \ k1_xboolean \quad (15)$$

Assume the following.

$$\forall X0.(v1_xboolean \ X0) \Rightarrow (\forall X1.(v1_xboolean \ X1) \Rightarrow (k4_xboolean \ X0 \ X1 = k3_xcmplx_0 \ X0 \ X1)) \quad (16)$$

Assume the following.

$$\forall X0.(v1_xboolean \ X0) \Rightarrow (k3_xboolean \ X0 = k6_xcmplx_0 \ np_1 \ X0) \quad (17)$$

Assume the following.

$$\forall X0.(v1_xboolean \ X0) \Leftrightarrow ((X0 = k1_xboolean) \vee (X0 = k2_xboolean)) \quad (18)$$

Assume the following.

$$k2_xboolean = np_1 \quad (19)$$

Assume the following.

$$k1_xboolean = k6_numbers \quad (20)$$

Assume the following.

$$\forall X0.(v1_xboolean\ X0) \Rightarrow (\forall X1.(v1_xboolean\ X1) \Rightarrow (k10_xboolean\ X0\ X1 = k3_xboolean\ (k7_xboolean\ X0\ X1))) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xboolean\ X0) \wedge (v1_xboolean\ X1)) \Rightarrow (k5_xboolean\ X0\ X1 = k5_xboolean\ X1\ X0) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xboolean\ X0) \wedge (v1_xboolean\ X1)) \Rightarrow (k4_xboolean\ X0\ X1 = k4_xboolean\ X1\ X0) \quad (23)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (v1_xcmplx_0\ X0) \quad (24)$$

Assume the following.

$$\forall X0.(v1_xboolean\ X0) \Rightarrow (v7_ordinal1\ X0) \quad (25)$$

Theorem 1

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