

t11_xboolean
(TMJA2imJV2ZZHwfuzKwSt7yEWSnUQsGHe1K)

October 27, 2020

Let $v1_xboolean : \iota \Rightarrow o$ be given. Let $k4_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $np_1 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_0 : \iota$ 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.

$$\forall X0.(v1_xboolean X0) \Rightarrow (\forall X1.(v1_xboolean X1) \Rightarrow (k5_xboolean X0 (k4_xboolean X0 X1) = X0)) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 np_1 X0 = X0) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 k6_numbers = k6_numbers) \quad (3)$$

Assume the following.

$$k6_xcmplx_0 np_1 np_1 = np_0 \quad (4)$$

Assume the following.

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

Assume the following.

$$v1_xboolean k2_xboolean \quad (6)$$

Assume the following.

$$v1_xboolean k1_xboolean \quad (7)$$

Assume the following.

$$\forall X0.(v1_xboolean X0) \Rightarrow (v1_xboolean (k3_xboolean X0)) \quad (8)$$

Assume the following.

$$\forall X0.(v1_xboolean\ X0) \Rightarrow (\forall X1.(v1_xboolean\ X1) \Rightarrow (k4_xboolean\ X0\ X1 = k3_xcmplx_0\ X0\ X1)) \quad (9)$$

Assume the following.

$$\forall X0.(v1_xboolean\ X0) \Rightarrow (k3_xboolean\ X0 = k6_xcmplx_0\ np_1\ X0) \quad (10)$$

Assume the following.

$$\forall X0.(v1_xboolean\ X0) \Leftrightarrow ((X0 = k1_xboolean) \vee (X0 = k2_xboolean)) \quad (11)$$

Assume the following.

$$k2_xboolean = np_1 \quad (12)$$

Assume the following.

$$k1_xboolean = k6_numbers \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xboolean\ X0) \wedge (v1_xboolean\ X1)) \Rightarrow (k5_xboolean\ X0\ X1 = k5_xboolean\ X1\ X0) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xboolean\ X0) \wedge (v1_xboolean\ X1)) \Rightarrow (k4_xboolean\ X0\ X1 = k4_xboolean\ X1\ X0) \quad (15)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (v1_xcmplx_0\ X0) \quad (16)$$

Assume the following.

$$\forall X0.(v1_xboolean\ X0) \Rightarrow (v7_ordinal1\ X0) \quad (17)$$

Theorem 1

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