

t22_xboolean (TMVQPAboNwmnWFLocyC853FrY1mLmaKoxWq)

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Let $v1_xboolean : \iota \Rightarrow o$ be given. Let $k4_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k6_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\forall X0. \forall X1. ((v1_xboolean X0) \wedge (v1_xboolean X1)) \Rightarrow (v1_xboolean (k7_xboolean X0 X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xboolean X0) \wedge (v1_xboolean X1)) \Rightarrow (v1_xboolean (k6_xboolean X0 X1)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xboolean X0) \wedge (v1_xboolean X1)) \Rightarrow (v1_xboolean (k4_xboolean X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0. (v1_xboolean X0) \Rightarrow (\forall X1. (v1_xboolean X1) \Rightarrow (k7_xboolean X0 X1 = k4_xboolean (k6_xboolean X0 X1) (k6_xboolean X1 X0))) \quad (5)$$

Assume the following.

$$\forall X0. (v1_xboolean X0) \Rightarrow (\forall X1. (v1_xboolean X1) \Rightarrow (k6_xboolean X0 X1 = k5_xboolean (k3_xboolean X0) X1)) \quad (6)$$

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.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xcmplx_0\ X0) \quad (8)$$

Assume the following.

$$\forall X0.(v1_xboolean\ X0)\Rightarrow(v7_ordinal1\ X0) \quad (9)$$

Theorem 1

$$\forall X0.(v1_xboolean\ X0)\Rightarrow(\forall X1.(v1_xboolean\ X1)\Rightarrow(\forall X2.(v1_xboolean\ X2)\Rightarrow(k4_xboolean\ X0\ (k7_xboolean\ X1\ X2) = k4_xboolean\ (k4_xboolean\ X0\ (k5_xboolean\ (k3_xboolean\ X1)\ X2))\ (k5_xboolean\ (k3_xboolean\ X2)\ X1))))$$