

t66_xxreal_3 (TMXbCY-
wdi9UC1gRKLLVRDqEpXEuoSAVHiKy)

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Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k4_xxreal_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ 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.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow (\forall X1. (v1_xxreal_0 X1) \Rightarrow (\forall X2. (v1_xreal_0 X2) \Rightarrow ((\neg v1_xreal_0 X0) \Rightarrow (k4_xxreal_3 X0 (k4_xxreal_3 X1 X2) = k4_xxreal_3 (k4_xxreal_3 X0 X1) X2)))))) \quad (2)$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow (\forall X1. (v1_xxreal_0 X1) \Rightarrow (\forall X2. (v1_xreal_0 X2) \Rightarrow ((\neg v1_xreal_0 X0) \Rightarrow (k4_xxreal_3 X1 (k4_xxreal_3 X0 X2) = k4_xxreal_3 (k4_xxreal_3 X1 X0) X2)))))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((v1_xreal_0 X0) \wedge ((v1_xreal_0 X1) \wedge ((v1_xcmplx_0 X2) \wedge (v1_xcmplx_0 X3)))) \Rightarrow (((X0 = X2) \wedge (X1 = X3)) \Rightarrow (k4_xxreal_3 X0 X1 = k3_xcmplx_0 X2 X3)) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (v1_xreal_0 (k3_xcmplx_0 X0 X1)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (v1_xcmplx_0 (k3_xcmplx_0 X0 X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(v1_xxreal_0 (k4_xxreal_3 X0 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(k4_xxreal_3 X0 X1 = k4_xxreal_3 X1 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k3_xcmplx_0 X0 X1 = k3_xcmplx_0 X1 X0) \quad (9)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xxreal_0 X0) \quad (10)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xcmplx_0 X0) \quad (11)$$

Theorem 1

$$\forall X0.(v1_xxreal_0 X0)\Rightarrow(\forall X1.(v1_xxreal_0 X1)\Rightarrow(\forall X2.(v1_xxreal_0 X2)\Rightarrow(k4_xxreal_3 X0 (k4_xxreal_3 X1 X2) = k4_xxreal_3 (k4_xxreal_3 X0 X1) X2)))$$