

t94_xreal_1
(TMJCxLx3jjNat5edabYELwiBXCXNpiehPjf)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_0 : \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 X0 X1) \wedge ((\neg v2_xxreal_0 X0) \wedge (\neg v3_xxreal_0 X1)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(r1_xxreal_0 X0 X1) \wedge ((\neg v2_xxreal_0 X1) \wedge (v2_xxreal_0 X0)))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(r1_xxreal_0 X0 X1) \wedge ((\neg v3_xxreal_0 X0) \wedge (v3_xxreal_0 X1)))) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k2_xcmplx_0 X0 k6_numbers = X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k2_xcmplx_0 X0 (k4_xcmplx_0 X1) = k6_xcmplx_0 X0 X1) \quad (6)$$

Assume the following.

$$(m2_subset_1\ np_0\ k1_numbers\ k5_numbers) \wedge ((m1_subset_1\ np_0\ k5_numbers) \wedge (m1_subset_1\ np_0\ k1_numbers)) \quad (7)$$

Assume the following.

$$v1_xboole_0\ np_0 \quad (8)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (9)$$

Assume the following.

$$\exists X0.(v1_xboole_0\ X0) \wedge (v1_xxreal_0\ X0) \quad (10)$$

Assume the following.

$$\exists X0.v1_xboole_0\ X0 \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xxreal_0\ X0) \Rightarrow (\forall X1.(v1_xxreal_0\ X1) \Rightarrow (\forall X2. \\ (v1_xxreal_0\ X2) \Rightarrow ((r1_xxreal_0\ X0\ (k6_xcmplx_0\ X1\ X2)) \Rightarrow (r1_xxreal_0 \\ (k2_xcmplx_0\ X0\ X2)\ X1)))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xxreal_0\ X0) \Rightarrow (\forall X1.(v1_xxreal_0\ X1) \Rightarrow (\forall X2. \\ (v1_xxreal_0\ X2) \Rightarrow ((r1_xxreal_0\ (k2_xcmplx_0\ X0\ X1)\ X2) \Rightarrow (r1_xxreal_0 \\ X0\ (k6_xcmplx_0\ X2\ X1)))))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xxreal_0\ X0) \Rightarrow (\forall X1.((\neg v2_xxreal_0\ X1) \wedge (\\ (\neg v3_xxreal_0\ X1) \wedge (v1_xxreal_0\ X1))) \Rightarrow (k6_numbers = k3_xcmplx_0 \\ X1\ X0)) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v3_xxreal_0\ X0) \wedge (v1_xxreal_0\ X0)) \wedge \\ ((\neg v3_xxreal_0\ X1) \wedge (v1_xxreal_0\ X1))) \Rightarrow (\neg v3_xxreal_0\ (k2_xcmplx_0 \\ X0\ X1)) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0\ X0) \wedge (v1_xxreal_0\ X1)) \Rightarrow (v1_xxreal_0\ (k6_xcmplx_0\ X0\ X1)) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0\ X0) \wedge (v1_xxreal_0\ X1)) \Rightarrow (v1_xxreal_0\ (k3_xcmplx_0\ X0\ X1)) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow(v1_xreal_0 (k2_xcmplx_0 X0 X1)) \quad (18)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow((v1_xcmplx_0 (k4_xcmplx_0 X0))\wedge(v1_xreal_0 (k4_xcmplx_0 X0))) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v3_xxreal_0 X0)\wedge(v1_xreal_0 X0))\wedge((\neg v3_xxreal_0 X1)\wedge(v1_xreal_0 X1)))\Rightarrow(\neg v3_xxreal_0 (k3_xcmplx_0 X0 X1)) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_xxreal_0 X0)\wedge(v1_xreal_0 X0))\wedge((\neg v2_xxreal_0 X1)\wedge(v1_xreal_0 X1)))\Rightarrow(\neg v3_xxreal_0 (k3_xcmplx_0 X0 X1)) \quad (21)$$

Assume the following.

$$\forall X0.\forall X1.(((v3_xxreal_0 X0)\wedge(v1_xreal_0 X0))\wedge((\neg v3_xxreal_0 X1)\wedge(v1_xreal_0 X1)))\Rightarrow(v3_xxreal_0 (k6_xcmplx_0 X0 X1)) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k3_xcmplx_0 X0 X1 = k3_xcmplx_0 X1 X0) \quad (23)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k2_xcmplx_0 X0 X1 = k2_xcmplx_0 X1 X0) \quad (24)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0)\wedge(v3_xxreal_0 X0))\Rightarrow((\neg v1_xboole_0 X0)\wedge((v1_xxreal_0 X0)\wedge(\neg v2_xxreal_0 X0))) \quad (25)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xxreal_0 X0) \quad (26)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0)\wedge(v2_xxreal_0 X0))\Rightarrow((\neg v1_xboole_0 X0)\wedge((v1_xxreal_0 X0)\wedge(\neg v3_xxreal_0 X0))) \quad (27)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (28)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (29)$$

Theorem 1

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 \\ k6_numbers X0) \Rightarrow ((r1_xxreal_0 k6_numbers (k3_xcmplx_0 (k6_xcmplx_0 \\ X1 X0) (k2_xcmplx_0 X1 X0))) \vee ((\neg r1_xxreal_0 X1 (k4_xcmplx_0 X0)) \wedge \\ (\neg r1_xxreal_0 X0 X1)))))) \end{aligned}$$