

t72_int_1

(TMR8eGUGMUCh5NXoDj2AkDieYkThNj2FMKG)

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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 $k4_int_1 : \iota \Rightarrow \iota$ be given. Let $k3_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_int_1 : \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(r1_xxreal_0 \\ (k3_real_1 (k1_int_1 X1) np_1) X0) \wedge (\neg r1_xxreal_0 (k3_real_1 \\ X1 np_1) X0) \wedge (r1_xxreal_0 (k4_int_1 X1) (k4_int_1 X0)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg \\ r1_xxreal_0 X1 X0) \wedge (\neg r1_xxreal_0 (k3_real_1 (k1_int_1 X0) np_1) \\ X1) \wedge (r1_xxreal_0 (k4_int_1 X1) (k4_int_1 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ (v1_xreal_0 X2) \Rightarrow ((r1_xxreal_0 (k2_xcmplx_0 X0 X1) X2) \Leftrightarrow (r1_xxreal_0 \\ X0 (k6_xcmplx_0 X2 X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (r1_xxreal_0 X0 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(m1_subset_1 X1 k1_numbers))\Rightarrow (k3_real_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (6)$$

Assume the following.

$$\exists X0.(v1_xcmplx_0 X0)\wedge((v1_xxreal_0 X0)\wedge((v3_xxreal_0 X0)\wedge(v1_xreal_0 X0))) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow(\forall X2.(v1_xreal_0 X2)\Rightarrow(\forall X3.(v1_xreal_0 X3)\Rightarrow(\neg(\neg r1_xxreal_0 X1 X0)\wedge((r1_xxreal_0 X2 X3)\wedge(r1_xxreal_0 (k2_xcmplx_0 X1 X3) (k2_xcmplx_0 X0 X2)))))))) \quad (8)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow(\forall X2.(v1_xreal_0 X2)\Rightarrow((r1_xxreal_0 X0 X1)\Rightarrow(r1_xxreal_0 (k2_xcmplx_0 X0 X2) (k2_xcmplx_0 X1 X2)))))) \quad (9)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow(((r1_xxreal_0 X0 X1)\wedge(r1_xxreal_0 X1 X0))\Rightarrow(X0 = X1))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow(v1_xreal_0 (k6_xcmplx_0 X0 X1)) \quad (11)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(m1_subset_1 (k4_int_1 X0) k1_numbers) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k2_xcmplx_0 X0 X1 = k2_xcmplx_0 X1 X0) \quad (13)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xxreal_0 X0) \quad (14)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xcmplx_0 X0) \quad (15)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X0 X2) \wedge \\ & k4_int_1 X1 = k4_int_1 X2))) \Rightarrow ((r1_xxreal_0 (k3_real_1 X0 np_1) \\ & X1) \vee ((r1_xxreal_0 (k3_real_1 X0 np_1) X2) \vee (X1 = X2)))))) \end{aligned}$$