

t163_xreal_1

(TMMRQ7cEpkfVhWvxCoYZ2ogjiHwqnuGPFP)

October 27, 2020

Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_0 : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (&(\neg(\neg r1_xxreal_0 k6_numbers X0) \wedge \\ &(r1_xxreal_0 (k4_xcmplx_0 X0) k6_numbers)) \wedge (\neg(\neg r1_xxreal_0 \\ &(k4_xcmplx_0 X0) k6_numbers) \wedge (r1_xxreal_0 k6_numbers X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(r1_xxreal_0 X0 X1) \wedge (\neg v3_xxreal_0 X0) \wedge (v3_xxreal_0 X1)))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Leftrightarrow (r1_xxreal_0 (k4_xcmplx_0 X1) (k4_xcmplx_0 X0)))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 (k4_xcmplx_0 X0) (k4_xcmplx_0 np_1) = X0) \quad (4)$$

Assume the following.

$$k4_xcmplx_0 (k4_xcmplx_0 np_1) = np_1 \quad (5)$$

Assume the following.

$$k2_xcmplx_0 np_1 (k4_xcmplx_0 np_1) = np_0 \quad (6)$$

Assume the following.

$$r1_xxreal_0 np_0 np_1 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(r1_xxreal_0 X0 X0) \quad (8)$$

Assume the following.

$$\begin{aligned} &\forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow(\forall X2. \\ &(v1_xreal_0 X2)\Rightarrow(((r1_xxreal_0 X0 X1)\wedge(r1_xxreal_0 X2 k6_numbers))\Rightarrow \\ &(r1_xxreal_0 (k3_xcmplx_0 X1 X2) (k3_xcmplx_0 X0 X2)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} &\forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow(\forall X2. \\ &(v1_xreal_0 X2)\Rightarrow(((r1_xxreal_0 X0 X1)\wedge(r1_xxreal_0 X1 X2))\Rightarrow(\\ &r1_xxreal_0 X0 X2)))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow(((r1_xxreal_0 X0 X1)\wedge(r1_xxreal_0 X1 X0))\Rightarrow(X0 = X1))) \quad (11)$$

Assume the following.

$$m1_subset_1 np_1 k1_numbers \quad (12)$$

Assume the following.

$$k2_xcmplx_0 np_1 (k4_xcmplx_0 np_1) = k6_numbers \quad (13)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0)\Rightarrow(k4_xcmplx_0 (k4_xcmplx_0 X0) = X0) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow(v1_xreal_0 (k3_xcmplx_0 X0 X1)) \quad (15)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow((v1_xcmplx_0 (k4_xcmplx_0 X0))\wedge(v1_xreal_0 (k4_xcmplx_0 X0))) \quad (16)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0)\Rightarrow((v3_xxreal_0 X0)\Leftrightarrow(\neg r1_xxreal_0 k6_numbers X0)) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k3_xcmplx_0 X0 X1 = k3_xcmplx_0 X1 X0) \quad (18)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (19)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (20)$$

Theorem 1

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (((r1_xxreal_0 \\ X0 (k4_xcmplx_0 np_1)) \wedge (r1_xxreal_0 X1 (k4_xcmplx_0 np_1))) \Rightarrow \\ (r1_xxreal_0 np_1 (k3_xcmplx_0 X0 X1)))) \end{aligned}$$