

t2_topreala
(TMQfu43G5aeTtAP7FSKisPxjAUitLzmMDSy)

October 27, 2020

Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k3_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k4_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $np_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_relat_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v2_finseq_1 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow \\ & (\forall X1.(v7_ordinal1 X1) \Rightarrow ((X1 \in k1_relset_1 k5_numbers X0) \Leftrightarrow \\ & ((r1_xxreal_0 np_1 X1) \wedge (r1_xxreal_0 X1 (k3_finseq_1 X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1)) \quad (4)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(v7_ordinal1\ X1)\Rightarrow((\neg r1_xreal_0\ (k1_nat_1\ X1\ np_1)\ X0)\Leftrightarrow(r1_xreal_0\ X0\ X1))) \quad (6)$$

Assume the following.

$$((v2_xreal_0\ np_1)\wedge(m2_subset_1\ np_1\ k1_numbers\ k5_numbers))\wedge((m1_subset_1\ np_1\ k5_numbers)\wedge(m1_subset_1\ np_1\ k1_numbers)) \quad (7)$$

Assume the following.

$$(m2_subset_1\ np_0\ k1_numbers\ k5_numbers)\wedge((m1_subset_1\ np_0\ k5_numbers)\wedge(m1_subset_1\ np_0\ k1_numbers)) \quad (8)$$

Assume the following.

$$v1_xboole_0\ np_0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0\ X0)\wedge((\neg v1_xboole_0\ X1)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1\ X0))))\Rightarrow(\forall X2.(m2_subset_1\ X2\ X0\ X1)\Leftrightarrow(m1_subset_1\ X2\ X1)) \quad (10)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (11)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (12)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_finseq_1\ X0)))\Rightarrow(k4_finseq_1\ X0 = k9_xtuple_0\ X0) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0\ X0)\wedge(m1_subset_1\ X1\ k1_numbers))\Rightarrow(k3_real_1\ X0\ X1 = k2_xcmplx_0\ X0\ X1) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1\ X1)\wedge(v4_relat_1\ X1\ X0))\Rightarrow(k1_relset_1\ X0\ X1 = k9_xtuple_0\ X1) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(m1_subset_1\ X1\ k5_numbers))\Rightarrow(k1_nat_1\ X0\ X1 = k2_xcmplx_0\ X0\ X1) \quad (16)$$

Assume the following.

$$\exists X0.(v1_relat_1 X0) \wedge ((v2_relat_1 X0) \wedge ((v4_relat_1 X0 \quad k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((\neg v1_xboole_0 X0) \wedge ((v1_finset_1 X0) \wedge ((v1_finseq_1 X0) \wedge (v2_finseq_1 X0))))))) \quad (17)$$

Assume the following.

$$v6_membered \quad k4_ordinal1 \quad (18)$$

Assume the following.

$$\neg v1_xboole_0 \quad k1_numbers \quad (19)$$

Assume the following.

$$m1_subset_1 \quad k5_numbers \quad (k1_zfmisc_1 \quad k1_numbers) \quad (20)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (m1_subset_1 \quad (k4_finseq_1 X0) \quad (k1_zfmisc_1 \quad k5_numbers)) \quad (21)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow (m2_subset_1 \quad (k3_finseq_1 X0) \quad k1_numbers \quad k5_numbers) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (r1_xxreal_0 X0 X1) \vee (r1_xxreal_0 X1 X0) \quad (23)$$

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.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow ((v1_xboole_0 X1) \wedge ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)))) \quad (25)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0))) \Rightarrow ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 \quad k5_numbers) \wedge ((v1_funct_1 X0) \wedge (v1_finseq_1 X0)))) \quad (26)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (27)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xreal_0\ X0) \quad (28)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xreal_0\ X0) \quad (29)$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v7_ordinal1\ X1)) \quad (30)$$

Theorem 1

$$\begin{aligned} &\forall X0.((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v1_finseq_1\ X0)))\Rightarrow \\ &(\forall X1.(v7_ordinal1\ X1)\Rightarrow(\neg(k3_real_1\ X1\ np_1 \in k4_finseq_1 \\ &X0)\wedge(\neg X1 \in k4_finseq_1\ X0)\wedge(X1\neq k6_numbers)))) \end{aligned}$$