

t37_fvaluat1

(TMWqbKpjbtA5e4kW6fHkTfnjcHmA8tycQsw)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v6_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v1_realset2 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_fvaluat1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_fvaluat1 : \iota \Rightarrow o$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_numbers : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k5_fvaluat1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k4_xxreal_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_fvaluat1 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_fvaluat1 : \iota \Rightarrow \iota$ be given. Let $v1_fvaluat1 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v33_algstr_0 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \tag{1}$$

Assume the following.

$$k6_numbers = k1_xboole_0 \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1_xboole_0 X0) \wedge (v1_xxreal_0 X0)) \wedge \\ (v1_xxreal_0 X1) \Rightarrow ((v1_xboole_0 (k4_xxreal_3 X0 X1)) \wedge (v1_xxreal_0 \\ (k4_xxreal_3 X0 X1))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v1_xboole_0 X0) \wedge (v1_xxreal_0 X0)) \wedge \\ & ((\neg v1_xboole_0 X1) \wedge (v1_xxreal_0 X1))) \Rightarrow ((\neg v1_xboole_0 (k4_xxreal_3 \\ & X0 X1)) \wedge (v1_xxreal_0 (k4_xxreal_3 X0 X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l1_struct_0 X0)) \Rightarrow (\neg v1_xboole_0 (u1_struct_0 X0)) \quad (5)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l6_algstr_0 X0) \Rightarrow (\forall X1. (m1_fvaluat1 X1 X0) \Rightarrow \\ & ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 X0) k7_numbers) \wedge \\ & ((v2_fvaluat1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X0) k7_numbers))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. (l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (8)$$

Assume the following.

$$\forall X0. (l2_struct_0 X0) \Rightarrow (l1_struct_0 X0) \quad (9)$$

Assume the following.

$$\forall X0. (l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge \\ & ((v13_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v1_realset2 X0) \wedge \\ & (l6_algstr_0 X0)))))))))) \wedge (m1_fvaluat1 X1 X0)) \Rightarrow (m1_fvaluat1 \\ & (k5_fvaluat1 X0 X1) X0) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 X3 X0)) \Rightarrow (m1_subset_1 (\\ & k3_funct_2 X0 X1 X2 X3) X1) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(m1_subset_1 (k2_relset_1 X0 X1) (k1_zfmisc_1 X0)) \quad (13)$$

Assume the following.

$$\forall X0.(v2_membered X0)\Rightarrow((v2_xxreal_0 (k1_fvaluat1 X0))\wedge(v1_fvaluat1 (k1_fvaluat1 X0))) \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0)\wedge((\neg v6_struct_0 X0)\wedge((v13_algstr_0 \\ X0)\wedge((v3_group_1 X0)\wedge((v5_vectsp_1 X0)\wedge((v2_rlvect_1 X0)\wedge(\\ (v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v1_realset2 X0)\wedge(l6_algstr_0 \\ X0))))))))))\Rightarrow(\forall X1.(m1_fvaluat1 X1 X0)\Rightarrow((v3_fvaluat1 \\ X0)\Rightarrow(\forall X2.(m1_fvaluat1 X2 X0)\Rightarrow((X2 = k5_fvaluat1 X0 X1)\Leftrightarrow \\ (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow(k3_funct_2 (u1_struct_0 \\ X0) k7_numbers X1 X3 = k4_xxreal_3 (k3_funct_2 (u1_struct_0 X0) \\ k7_numbers X2 X3) (k1_fvaluat1 (k2_relset_1 k7_numbers X1)))))))))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k7_numbers))\Rightarrow(v2_membered X0) \quad (16)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0)\wedge(v2_xxreal_0 X0))\Rightarrow((\neg v1_xboole_0 X0)\wedge((v1_xxreal_0 X0)\wedge(\neg v3_xxreal_0 X0))) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (18)$$

Assume the following.

$$\begin{aligned} \forall X0.(l6_algstr_0 X0)\Rightarrow(((\neg v6_struct_0 X0)\wedge((v13_algstr_0 \\ X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge \\ ((v5_vectsp_1 X0)\wedge(v1_realset2 X0))))))))\Rightarrow(((\neg v6_struct_0 X0)\wedge \\ ((v33_algstr_0 X0)\wedge((v3_group_1 X0)\wedge((v5_group_1 X0)\wedge(v4_vectsp_1 \\ X0)))))) \end{aligned} \quad (19)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k7_numbers)\Rightarrow(v1_xxreal_0 X0) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (21)$$

Assume the following.

$$\forall X0.(v1_fvaluat1 X0) \Rightarrow (v1_xxreal_0 X0) \quad (22)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\ & X0) \wedge ((v3_group_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge \\ & (v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v1_realset2 X0) \wedge (l6_algstr_0 \\ & X0)))))))))) \Rightarrow (\forall X1.(m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\ & (\forall X2.(m1_fvaluat1 X2 X0) \Rightarrow ((v3_fvaluat1 X0) \Rightarrow ((k3_funct_2 \\ & (u1_struct_0 X0) k7_numbers X2 X1 = k6_numbers) \Leftrightarrow (k3_funct_2 (u1_struct_0 \\ & X0) k7_numbers (k5_fvaluat1 X0 X2) X1 = k6_numbers)))))) \end{aligned}$$