

t22_fvaluat1

(TMJ1nat9u62NH68ujbYeKnBjPqzuAhnyyYs)

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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 $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_numbers : \iota$ be given. Let $k1_vectsp_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_supinf_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_supinf_2 : \iota \Rightarrow \iota$ be given. Let $k3_xxreal_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xxreal_3 : \iota \Rightarrow \iota$ be given. Let $v1_ideal_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_ideal_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v2_fvaluat1 : \iota \Rightarrow o$ be given. Let $v1_fvaluat1 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $v33_algstr_0 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $k1_xxreal_0 : \iota$ be given. Let $k4_numbers : \iota$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xxreal_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
 & X0) \wedge ((v3_group_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge (\\
 & (v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v1_realset2 X0) \wedge (l6_algstr_0 \\
 & X0)))))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (u1_struct_0 X0)) \Rightarrow \\
 & (\forall X2. (m1_fvaluat1 X2 X0) \Rightarrow ((v3_fvaluat1 X0) \Rightarrow ((X1 = k4_struct_0 \\
 & X0) \vee (k3_funct_2 (u1_struct_0 X0) k7_numbers X2 (k11_algstr_0 \\
 & X0 X1) = k2_supinf_2 (k3_funct_2 (u1_struct_0 X0) k7_numbers X2 \\
 & X1))))))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k7_numbers)\wedge(m1_subset_1 X1 k7_numbers))\Rightarrow(k4_supinf_2 X0 X1 = k3_xxreal_3 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge(((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\wedge(m1_subset_1 X3 X0)))\Rightarrow(k3_funct_2 X0 X1 X2 X3 = k1_funct_1 X2 X3) \quad (3)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k7_numbers)\Rightarrow(k2_supinf_2 X0 = k2_xxreal_3 X0) \quad (4)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l6_algstr_0 X0))\Rightarrow(\exists X1.(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))\wedge((\neg v1_xboole_0 X1)\wedge((v1_ideal_1 X1 X0)\wedge(v3_ideal_1 X1 X0)))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v2_fvaluat1 X0)))\Rightarrow(v1_fvaluat1 (k1_funct_1 X0 X1)) \quad (6)$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0)\Rightarrow(\forall X1.(m1_fvaluat1 X1 X0)\Rightarrow((v1_funct_1 X1)\wedge((v1_funct_2 X1 (u1_struct_0 X0) k7_numbers)\wedge((v2_fvaluat1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) k7_numbers)))))))) \quad (7)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge(((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\wedge(m1_subset_1 X3 X0)))\Rightarrow(m1_subset_1 (k3_funct_2 X0 X1 X2 X3) X1) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge((\neg v6_struct_0 X0)\wedge((v13_algstr_0 X0)\wedge((v33_algstr_0 X0)\wedge((v3_group_1 X0)\wedge((v4_vectsp_1 X0)\wedge((v5_vectsp_1 X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge(l6_algstr_0 X0))))))))))\wedge((m1_subset_1 X1 (u1_struct_0 X0)\wedge(m1_subset_1 X2 (u1_struct_0 X0))))))\Rightarrow(m1_subset_1 (k1_vectsp_2 X0 X1 X2) (u1_struct_0 X0)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((l5_algstr_0 X0)\wedge(m1_subset_1 X1 (u1_struct_0 X0)))\Rightarrow(m1_subset_1 (k11_algstr_0 X0 X1) (u1_struct_0 X0)) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.(l6_algstr_0 X0)\Rightarrow((v3_fvaluat1 X0)\Rightarrow(\forall X1.(\\ (v1_funct_1 X1)\wedge((v1_funct_2 X1 (u1_struct_0 X0) k7_numbers)\wedge \\ ((v2_fvaluat1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ (u1_struct_0 X0) k7_numbers))))))\Rightarrow((m1_fvaluat1 X1 X0)\Leftrightarrow((k1_funct_1 \\ X1 (k4_struct_0 X0) = k1_xxreal_0)\wedge((\forall X2.(m1_subset_1 \\ X2 (u1_struct_0 X0))\Rightarrow((X2\neq k4_struct_0 X0)\Rightarrow(k1_funct_1 X1 X2 \in \\ k4_numbers)))\wedge((\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow \\ (\forall X3.(m1_subset_1 X3 (u1_struct_0 X0))\Rightarrow(k1_funct_1 X1 \\ (k6_algstr_0 X0 X2 X3) = k1_xxreal_3 (k1_funct_1 X1 X2) (k1_funct_1 \\ X1 X3))))\wedge((\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow((r1_xxreal_0 \\ k6_numbers (k1_funct_1 X1 X2))\Rightarrow(r1_xxreal_0 k6_numbers (k1_funct_1 \\ X1 (k1_algstr_0 X0 (k5_struct_0 X0) X2))))\wedge(\exists X2.(m1_subset_1 \\ X2 (u1_struct_0 X0))\wedge((k1_funct_1 X1 X2\neq k6_numbers)\wedge(k1_funct_1 \\ X1 X2\neq k1_xxreal_0)))))))))) \quad (12) \end{aligned}$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0)\Rightarrow(\forall X1.(v1_xxreal_0 X1)\Rightarrow(k3_xxreal_3 X0 X1 = k1_xxreal_3 X0 (k2_xxreal_3 X1))) \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0)\wedge((\neg v6_struct_0 X0)\wedge((v13_algstr_0 \\ X0)\wedge((v33_algstr_0 X0)\wedge((v3_group_1 X0)\wedge((v4_vectsp_1 X0)\wedge \\ ((v5_vectsp_1 X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 \\ X0)\wedge(l6_algstr_0 X0))))))))))\Rightarrow(\forall X1.(m1_subset_1 X1 \\ (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow \\ (k1_vectsp_2 X0 X1 X2 = k6_algstr_0 X0 X1 (k11_algstr_0 X0 X2)))) \quad (14) \end{aligned}$$

Assume the following.

$$\begin{aligned} \forall X0.(l6_algstr_0 X0)\Rightarrow(((\neg v6_struct_0 X0)\wedge((v13_algstr_0 \\ X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge \\ ((v5_vectsp_1 X0)\wedge(v1_realset2 X0))))))\Rightarrow((\neg v6_struct_0 X0)\wedge \\ ((v33_algstr_0 X0)\wedge((v3_group_1 X0)\wedge((v5_group_1 X0)\wedge(v4_vectsp_1 \\ X0)))))) \quad (15) \end{aligned}$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_xboole_0 X1)) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (17)$$

Assume the following.

$$\forall X0.(v1_fvaluat1 X0)\Rightarrow(v1_xxreal_0 X0) \quad (18)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((\neg v6_struct_0 X0)\wedge((v13_algstr_0 \\ & X0)\wedge((v3_group_1 X0)\wedge((v5_vectsp_1 X0)\wedge((v2_rlvect_1 X0)\wedge(\\ & (v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge((v1_realset2 X0)\wedge(l6_algstr_0 \\ & X0))))))))))\Rightarrow(\forall X1.(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (u1_struct_0 X0))\Rightarrow(\forall X3.(m1_fvaluat1 \\ & X3 X0)\Rightarrow((v3_fvaluat1 X0)\Rightarrow((X1 = k4_struct_0 X0)\vee(k3_funct_2 (\\ & u1_struct_0 X0) k7_numbers X3 (k1_vectsp_2 X0 X2 X1) = k4_supinf_2 \\ & (k3_funct_2 (u1_struct_0 X0) k7_numbers X3 X2) (k3_funct_2 (u1_struct_0 \\ & X0) k7_numbers X3 X1))))))) \end{aligned}$$