

t33_quofield

(TMaw3t6vMb5546kwe4AQNwBBNNRYgc5Cq81)

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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 $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $v1_vectsp_2 : \iota \Rightarrow o$ 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 $k19_quofield : \iota \Rightarrow \iota$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_quofield : \iota \Rightarrow \iota$ be given. Let $k7_quofield : \iota \Rightarrow \iota$ be given. Let $r1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k15_quofield : \iota \Rightarrow \iota$ be given. Let $u2_algstr_0 : \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k11_quofield : \iota \Rightarrow \iota$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Let $k12_quofield : \iota \Rightarrow \iota$ 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 $k5_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge ((v13_algstr_0 \\
 & X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\
 & ((v3_group_1 X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 \\
 & X0) \wedge ((v1_vectsp_2 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow ((u1_struct_0 \\
 & (k19_quofield X0) = k7_quofield X0) \wedge ((r1_funct_2 (k2_zfmisc_1 \\
 & (u1_struct_0 (k19_quofield X0)) (u1_struct_0 (k19_quofield X0))) \\
 & (u1_struct_0 (k19_quofield X0)) (k2_zfmisc_1 (k7_quofield X0) \\
 & (k7_quofield X0)) (k7_quofield X0) (u1_algstr_0 (k19_quofield \\
 & X0)) (k15_quofield X0)) \wedge ((r1_funct_2 (k2_zfmisc_1 (u1_struct_0 \\
 & (k19_quofield X0)) (u1_struct_0 (k19_quofield X0))) (u1_struct_0 \\
 & (k19_quofield X0)) (k2_zfmisc_1 (k7_quofield X0) (k7_quofield \\
 & X0)) (k7_quofield X0) (u2_algstr_0 (k19_quofield X0)) (k16_quofield \\
 & X0)) \wedge ((k4_struct_0 (k19_quofield X0) = k11_quofield X0) \wedge (k5_struct_0 \\
 & (k19_quofield X0) = k12_quofield X0))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1 X1)\wedge \\ & ((v1_funct_2 X1 (k2_zfmisc_1 X0 X0) X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0)))))\wedge((m1_subset_1 X2 X0)\wedge \\ & (m1_subset_1 X3 X0)))\Rightarrow(k5_binop_1 X0 X1 X2 X3 = k1_binop_1 X1 X2 X3) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1 X1)\wedge \\ & ((v1_funct_2 X1 (k2_zfmisc_1 X0 X0) X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 (k2_zfmisc_1 X0 X0) X0)))))\wedge((m1_subset_1 X2 X0)\wedge \\ & (m1_subset_1 X3 X0)))\Rightarrow(m1_subset_1 (k5_binop_1 X0 X1 X2 X3) X0) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((\neg v6_struct_0 X0)\wedge((v13_algstr_0 \\ & X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge \\ & ((v3_group_1 X0)\wedge((v5_group_1 X0)\wedge((v4_vectsp_1 X0)\wedge((v5_vectsp_1 \\ & X0)\wedge((v1_vectsp_2 X0)\wedge(l6_algstr_0 X0))))))))))\Rightarrow((v1_funct_1 \\ & (k16_quofield X0)\wedge((v1_funct_2 (k16_quofield X0) (k2_zfmisc_1 \\ & (k7_quofield X0) (k7_quofield X0)) (k7_quofield X0))\wedge(m1_subset_1 \\ & (k16_quofield X0) (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (k7_quofield \\ & X0) (k7_quofield X0)) (k7_quofield X0)))))) \end{aligned} \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge((\neg v6_struct_0 X0)\wedge((v13_algstr_0 \\ & X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 X0)\wedge \\ & ((v3_group_1 X0)\wedge((v5_group_1 X0)\wedge((v4_vectsp_1 X0)\wedge((v5_vectsp_1 \\ & X0)\wedge((v1_vectsp_2 X0)\wedge(l6_algstr_0 X0))))))))))\Rightarrow(\forall X1. \\ & (m1_subset_1 X1 (u1_struct_0 (k19_quofield X0)))\Rightarrow(\forall X2. \\ & (m1_subset_1 X2 (u1_struct_0 (k19_quofield X0)))\Rightarrow(m1_subset_1 \\ & (k1_binop_1 (k16_quofield X0) X1 X2) (u1_struct_0 (k19_quofield \\ & X0)))))) \end{aligned}$$