

t3_mod_2

(TMcc9q9hJJEruegomQXjp6UiczVuEbVxmEV)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_group_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ 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 $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $v8_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v9_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v10_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v11_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_mod_2 : \iota \Rightarrow \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $g1_mod_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_mod_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_mod_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_mod_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ 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 $v2_mod_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u3_mod_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_mod_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_mod_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & ((\neg v1_xboole_0 X1) \wedge (\neg v1_xboole_0 X3) \wedge ((v1_funct_1 X4) \wedge ((v1_funct_2 X4 X0 X1) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \wedge ((v1_funct_1 X5) \wedge ((v1_funct_2 X5 X2 X3) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 X2 X3)))))) \Rightarrow ((r1_funct_2 X0 X1 X2 X3 X4 X5) \Leftrightarrow (X4 = X5)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v2_struct_0 \\
& X0)\wedge((v13_algstr_0 X0)\wedge((v3_group_1 X0)\wedge((v4_vectsp_1 X0)\wedge \\
& ((v5_vectsp_1 X0)\wedge((v2_rlvect_1 X0)\wedge((v3_rlvect_1 X0)\wedge((v4_rlvect_1 \\
& X0)\wedge(l6_algstr_0 X0))))))))\wedge(((\neg v2_struct_0 X1)\wedge((v13_algstr_0 \\
& X1)\wedge((v8_vectsp_1 X1 X0)\wedge((v9_vectsp_1 X1 X0)\wedge((v10_vectsp_1 \\
& X1 X0)\wedge((v11_vectsp_1 X1 X0)\wedge((v2_rlvect_1 X1)\wedge((v3_rlvect_1 \\
& X1)\wedge((v4_rlvect_1 X1)\wedge(l1_vectsp_1 X1 X0))))))))\wedge(((\neg v2_struct_0 \\
& X2)\wedge((v13_algstr_0 X2)\wedge((v8_vectsp_1 X2 X0)\wedge((v9_vectsp_1 X2 \\
& X0)\wedge((v10_vectsp_1 X2 X0)\wedge((v11_vectsp_1 X2 X0)\wedge((v2_rlvect_1 \\
& X2)\wedge((v3_rlvect_1 X2)\wedge((v4_rlvect_1 X2)\wedge(l1_vectsp_1 X2 X0))))))))\wedge \\
& ((v1_funct_1 X3)\wedge((v1_funct_2 X3 (u1_struct_0 X1) (u1_struct_0 \\
& X2))\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X1) (u1_struct_0 X2))))))))\Rightarrow(\forall X4.\forall X5.\forall X6. \\
& \forall X7.(g1_mod_2 X0 X1 X2 X3 = g1_mod_2 X4 X5 X6 X7)\Rightarrow((X0 = X4)\wedge \\
& ((X1 = X5)\wedge((X2 = X6)\wedge(X3 = X7))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0)\wedge(l1_struct_0 X0))\Rightarrow(\neg v1_xboole_0 (u1_struct_0 X0)) \tag{3}$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0)\Rightarrow((l2_algstr_0 X0)\wedge(l5_algstr_0 X0)) \tag{4}$$

Assume the following.

$$\forall X0.(l2_struct_0 X0)\Rightarrow(l1_struct_0 X0) \tag{5}$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0)\Rightarrow((l2_struct_0 X0)\wedge(l1_algstr_0 X0)) \tag{6}$$

Assume the following.

$$\forall X0.(l1_struct_0 X0)\Rightarrow(\forall X1.(l1_vectsp_1 X1 X0)\Rightarrow (l2_algstr_0 X1)) \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. (((\neg v2_struct_0 \\
& X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge \\
& ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 \\
& X0) \wedge (l6_algstr_0 X0)))))))) \wedge (((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 \\
& X1) \wedge ((v8_vectsp_1 X1 X0) \wedge ((v9_vectsp_1 X1 X0) \wedge ((v10_vectsp_1 \\
& X1 X0) \wedge ((v11_vectsp_1 X1 X0) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 \\
& X1) \wedge ((v4_rlvect_1 X1) \wedge (l1_vectsp_1 X1 X0)))))))) \wedge (((\neg v2_struct_0 \\
& X2) \wedge ((v13_algstr_0 X2) \wedge ((v8_vectsp_1 X2 X0) \wedge ((v9_vectsp_1 X2 \\
& X0) \wedge ((v10_vectsp_1 X2 X0) \wedge ((v11_vectsp_1 X2 X0) \wedge ((v2_rlvect_1 \\
& X2) \wedge ((v3_rlvect_1 X2) \wedge ((v4_rlvect_1 X2) \wedge (l1_vectsp_1 X2 X0)))))))) \wedge \\
& ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 (u1_struct_0 X1) (u1_struct_0 \\
& X2)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\
& X1) (u1_struct_0 X2)))))) \Rightarrow ((v2_mod_2 (g1_mod_2 X0 X1 X2 X3) \\
& X0) \wedge (l1_mod_2 (g1_mod_2 X0 X1 X2 X3) X0))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 \\
& X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge \\
& ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))) \Rightarrow \\
& (\forall X1. (l1_mod_2 X1 X0) \Rightarrow (k4_mod_2 X0 X1 = u3_mod_2 X0 X1))
\end{aligned} \tag{9}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 \\
& X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge \\
& ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))) \Rightarrow \\
& (\forall X1. (l1_mod_2 X1 X0) \Rightarrow (k3_mod_2 X0 X1 = u2_mod_2 X0 X1))
\end{aligned} \tag{10}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 \\
& X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge \\
& ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))) \Rightarrow \\
& (\forall X1. (l1_mod_2 X1 X0) \Rightarrow (k2_mod_2 X0 X1 = u1_mod_2 X0 X1))
\end{aligned} \tag{11}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge \\
& ((v3_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))) \wedge \\
& (l1_mod_2 X1 X0) \Rightarrow ((v2_mod_2 X1 X0) \Rightarrow (X1 = g1_mod_2 X0 (u1_mod_2 \\
& X0 X1) (u2_mod_2 X0 X1) (u3_mod_2 X0 X1)))
\end{aligned} \tag{12}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 \\
& X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge \\
& ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow \\
& (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v8_vectsp_1 \\
& X1 X0) \wedge ((v9_vectsp_1 X1 X0) \wedge ((v10_vectsp_1 X1 X0) \wedge ((v11_vectsp_1 \\
& X1 X0) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge \\
& (l1_vectsp_1 X1 X0)))))))))) \Rightarrow (\forall X2.((\neg v2_struct_0 X2) \wedge \\
& ((v13_algstr_0 X2) \wedge ((v8_vectsp_1 X2 X0) \wedge ((v9_vectsp_1 X2 X0) \wedge \\
& ((v10_vectsp_1 X2 X0) \wedge ((v11_vectsp_1 X2 X0) \wedge ((v2_rlvect_1 X2) \wedge \\
& ((v3_rlvect_1 X2) \wedge ((v4_rlvect_1 X2) \wedge (l1_vectsp_1 X2 X0)))))))))) \Rightarrow \\
& (\forall X3.(l1_mod_2 X3 X0) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge ((\\
& v1_funct_2 X4 (u1_struct_0 X1) (u1_struct_0 X2)) \wedge (m1_subset_1 \\
& X4 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) (u1_struct_0 X2)))))) \Rightarrow \\
& ((X3 = g1_mod_2 X0 X1 X2 X4) \Rightarrow ((k2_mod_2 X0 X3 = X1) \wedge ((k3_mod_2 X0 X3 = \\
& X2) \wedge (r1_funct_2 (u1_struct_0 (k2_mod_2 X0 X3)) (u1_struct_0 (\\
& k3_mod_2 X0 X3)) (u1_struct_0 X1) (u1_struct_0 X2) (k4_mod_2 X0 \\
& X3) X4))))))
\end{aligned}$$