

t7_mod_3 (TMLgr- goB2zJixHHbdPvPARX4QadreLqWhEC)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_mod_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_vectsp_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $r1_struct_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_tarSKI : \iota \Rightarrow \iota$ be given. Let $v7_vectsp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_vectsp_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1_subset_1 X1 (k1_zfmisc_1 X2)) \wedge (v1_xboole_0 X2)) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge \\ & ((v3_group_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge ((v2_rlvect_1 \\ & X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge (l6_algstr_0 X1)))))))) \Rightarrow \\ & (\forall X2.((\neg v2_struct_0 X2) \wedge ((v13_algstr_0 X2) \wedge ((v8_vectsp_1 \\ & X2 X1) \wedge ((v9_vectsp_1 X2 X1) \wedge ((v10_vectsp_1 X2 X1) \wedge ((v11_vectsp_1 \\ & X2 X1) \wedge ((v2_rlvect_1 X2) \wedge ((v3_rlvect_1 X2) \wedge ((v4_rlvect_1 X2) \wedge \\ & (l1_vectsp_1 X2 X1)))))))))) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ & (u1_struct_0 X2))) \Rightarrow ((X0 \in X3) \Rightarrow (r1_struct_0 (k1_mod_3 X1 X2 X3) \\ & X0)))) \quad (3) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge \\ & ((v3_group_1 X1) \wedge ((v4_vectsp_1 X1) \wedge ((v5_vectsp_1 X1) \wedge ((v2_rlvect_1 \\ & X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge (l6_algstr_0 X1)))))))) \Rightarrow \\ & (\forall X2.((\neg v2_struct_0 X2) \wedge ((v13_algstr_0 X2) \wedge ((v8_vectsp_1 \\ & X2 X1) \wedge ((v9_vectsp_1 X2 X1) \wedge ((v10_vectsp_1 X2 X1) \wedge ((v11_vectsp_1 \\ & X2 X1) \wedge ((v2_rlvect_1 X2) \wedge ((v3_rlvect_1 X2) \wedge ((v4_rlvect_1 X2) \wedge \\ & (l1_vectsp_1 X2 X1)))))))))) \Rightarrow ((r1_struct_0 (k1_vectsp_4 X1 X2) \\ & X0) \Leftrightarrow (X0 = k4_struct_0 X2))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow (k6_domain_1 X0 X1 = k1_tarski X1) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 \\ & X0) \wedge ((v3_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (\\ & (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 \\ & X0)))))))))) \wedge (((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v8_vectsp_1 \\ & X1 X0) \wedge ((v9_vectsp_1 X1 X0) \wedge ((v10_vectsp_1 X1 X0) \wedge ((v11_vectsp_1 \\ & X1 X0) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge \\ & (l1_vectsp_1 X1 X0)))))))))) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ & X1)))) \Rightarrow ((v7_vectsp_1 (k1_mod_3 X0 X1 X2) X0) \wedge (m1_vectsp_4 (k1_mod_3 \\ & X0 X1 X2) X0 X1)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 \\ & X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge \\ & ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))) \Rightarrow \\ & (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v8_vectsp_1 \\ & X1 X0) \wedge ((v9_vectsp_1 X1 X0) \wedge ((v10_vectsp_1 X1 X0) \wedge ((v11_vectsp_1 \\ & X1 X0) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge \\ & (l1_vectsp_1 X1 X0)))))))))) \Rightarrow (\forall X2.((v7_vectsp_1 X2 X0) \wedge \\ & (m1_vectsp_4 X2 X0 X1)) \Rightarrow ((X2 = k1_vectsp_4 X0 X1) \Leftrightarrow (u1_struct_0 \\ & X2 = k6_domain_1 (u1_struct_0 X1) (k4_struct_0 X1)))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Leftrightarrow (\forall X1.\neg X1 \in X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.(X1 = k1_tarski\ X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0\ X0) \wedge (v13_algstr_0\ X0) \wedge (v3_group_1 \\ & X0) \wedge (v4_vectsp_1\ X0) \wedge (v5_vectsp_1\ X0) \wedge (v2_rlvect_1\ X0) \wedge \\ & ((v3_rlvect_1\ X0) \wedge (v4_rlvect_1\ X0) \wedge (l6_algstr_0\ X0)))))) \Rightarrow \\ & (\forall X1.((\neg v2_struct_0\ X1) \wedge (v13_algstr_0\ X1) \wedge (v8_vectsp_1 \\ & X1\ X0) \wedge (v9_vectsp_1\ X1\ X0) \wedge (v10_vectsp_1\ X1\ X0) \wedge (v11_vectsp_1 \\ & X1\ X0) \wedge (v2_rlvect_1\ X1) \wedge (v3_rlvect_1\ X1) \wedge (v4_rlvect_1\ X1) \wedge \\ & (l1_vectsp_1\ X1\ X0)))))) \Rightarrow (\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (u1_struct_0\ X1))) \Rightarrow (\neg(k1_mod_3\ X0\ X1\ X2 = k1_vectsp_4\ X0\ X1) \wedge ((\\ & X2 \neq k1_xboole_0) \wedge (X2 \neq k6_domain_1\ (u1_struct_0\ X1)\ (k4_struct_0 \\ & X1)))))) \end{aligned}$$