

t1_rmod_2 (TMHkYeqSQxYRx- tQDagQRQH4p4TrRg1f1Dja)

October 27, 2020

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 $v4_vectsp_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_vectsp_2 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_rmod_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_vectsp_1 : \iota \Rightarrow o$ be given. Let $k5_vectsp_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_group_1 : \iota \Rightarrow \iota$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_struct_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_algstr_0 : \iota \Rightarrow o$ be given. Let $k3_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_vectsp_1 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 \\
& X0) \wedge ((v3_vectsp_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge \\
& ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 \\
& X0)))))))))) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 \\
& X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_2 X1 X0) \wedge \\
& (l1_vectsp_2 X1 X0)))))) \Rightarrow (\forall X2.(m1_subset_1 X2 (u1_struct_0 \\
& X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 X1)) \Rightarrow ((k5_vectsp_2 \\
& X0 X1 (k4_struct_0 X0) X3 = k4_struct_0 X1) \wedge ((k5_vectsp_2 X0 X1 (\\
& k4_algstr_0 X0 (k1_group_1 X0)) X3 = k4_algstr_0 X1 X3) \wedge (k5_vectsp_2 \\
& X0 X1 X2 (k4_struct_0 X1) = k4_struct_0 X1))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0. \exists X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \wedge (v1_xboole_0 X1) \tag{5}$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \tag{6}$$

Assume the following.

$$\forall X0.(l5_algstr_0 X0) \Rightarrow ((l4_algstr_0 X0) \wedge (l4_struct_0 X0)) \tag{7}$$

Assume the following.

$$\forall X0.(l2_algstr_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l1_algstr_0 X0)) \tag{8}$$

Assume the following.

$$\forall X0.(l2_struct_0 X0) \Rightarrow (m1_subset_1 (k4_struct_0 X0) (u1_struct_0 X0)) \tag{9}$$

Assume the following.

$$\forall X0. \forall X1.(r1_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \tag{10}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 \\
& X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge \\
& ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \Rightarrow \\
& (\forall X1.((\neg v2_struct_0 X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 \\
& X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge ((v4_vectsp_2 X1 X0) \wedge \\
& (l1_vectsp_2 X1 X0)))))) \Rightarrow (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\
& (u1_struct_0 X1)) \Rightarrow ((v1_rmod_2 X2 X0 X1) \Leftrightarrow ((\forall X3.(m1_subset_1 \\
& X3 (u1_struct_0 X1)) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\
& X1)) \Rightarrow (((X3 \in X2) \wedge (X4 \in X2)) \Rightarrow (k3_rlvect_1 X1 X3 X4 \in X2)))))) \wedge (\forall X3. \\
& (m1_subset_1 X3 (u1_struct_0 X0)) \Rightarrow (\forall X4.(m1_subset_1 X4 \\
& (u1_struct_0 X1)) \Rightarrow ((X4 \in X2) \Rightarrow (k5_vectsp_2 X0 X1 X3 X4 \in X2))))))
\end{aligned} \tag{11}$$

Assume the following.

$$\begin{aligned} \forall X0.(l4_algstr_0 X0) \Rightarrow & (((\neg v2_struct_0 X0) \wedge (v4_vectsp_1 \\ X0)) \Rightarrow & ((\neg v2_struct_0 X0) \wedge ((v3_vectsp_1 X0) \wedge (v6_vectsp_1 X0)))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc.1 X0)) \Rightarrow (v1_xboole_0 X1)) \quad (13)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge & ((v13_algstr_0 X0) \wedge ((v3_group_1 \\ X0) \wedge ((v4_vectsp_1 X0) \wedge & ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge \\ ((v3_rlvect_1 X0) \wedge (v4_rlvect_1 & X0) \wedge (l6_algstr_0 X0)))))))) \Rightarrow \\ (\forall X1.((\neg v2_struct_0 X1) \wedge & ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 \\ X1) \wedge ((v3_rlvect_1 X1) \wedge & (v4_rlvect_1 X1) \wedge ((v4_vectsp_2 X1 X0) \wedge \\ (l1_vectsp_2 X1 X0)))))) \Rightarrow & (\forall X2.(m1_subset_1 X2 (k1_zfmisc.1 \\ (u1_struct_0 X1)) \Rightarrow & ((v1_rmod_2 X2 X0 X1) \Rightarrow ((X2 = k1_xboole_0) \vee \\ (k4_struct_0 X1 \in X2)))))) \end{aligned}$$