

t7_rsspace4 (TMPCBht- duGsEuLzv8YDrjHG2wRetTTUaeF8)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ 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 $v5_rlvect_1 : \iota \Rightarrow o$ be given. Let $v6_rlvect_1 : \iota \Rightarrow o$ be given. Let $v7_rlvect_1 : \iota \Rightarrow o$ be given. Let $v8_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_normsp_0 : \iota \Rightarrow o$ be given. Let $v4_normsp_0 : \iota \Rightarrow o$ be given. Let $v2_normsp_1 : \iota \Rightarrow o$ be given. Let $l1_normsp_1 : \iota \Rightarrow o$ be given. Let $m1_rlsub_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $g1_rlvect_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_rsspace4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_rsspace : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_lopban_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_rsspace : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_rsspace : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_rlsub_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ 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 $l2_normsp_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge \\
 & ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 \\
 & X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge \\
 & ((v8_rlvect_1 X1) \wedge ((v3_normsp_0 X1) \wedge ((v4_normsp_0 X1) \wedge ((v2_normsp_1 \\
 & X1) \wedge (l1_normsp_1 X1)))))))))) \Rightarrow (v1_rlsub_1 (k4_rsspace4 \\
 & X0 X1) (k5_lopban_1 X0 X1)))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v2_rlvect_1 \\
 & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_rlvect_1 X0) \wedge \\
 & ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 X0) \wedge (l1_rlvect_1 \\
 & X0)))))))))) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\
 & X0))) \Rightarrow ((v1_rlsub_1 X1 X0) \Rightarrow ((v1_xboole_0 X1) \vee (m1_rlsub_1 (g1_rlvect_1 \\
 & X1 (k10_rsspace X0 X1) (k8_rsspace X0 X1) (k9_rsspace X0 X1)) X0))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v2_struct_0 X1) \wedge \\ & ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 \\ & X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge \\ & ((v8_rlvect_1 X1) \wedge ((v3_normsp_0 X1) \wedge ((v4_normsp_0 X1) \wedge ((v2_normsp_1 \\ & X1) \wedge (l1_normsp_1 X1)))))))))) \Rightarrow (\neg v1_xboole_0 (k4_rsspace4 \\ & X0 X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (l1_normsp_1 X0) \Rightarrow ((l1_rlvect_1 X0) \wedge (l2_normsp_0 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v2_struct_0 X1) \wedge \\ & ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 \\ & X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge \\ & ((v8_rlvect_1 X1) \wedge (l1_rlvect_1 X1)))))))))) \Rightarrow ((\neg v2_struct_0 \\ & (k5_lopban_1 X0 X1)) \wedge ((v13_algstr_0 (k5_lopban_1 X0 X1)) \wedge ((v2_rlvect_1 \\ & (k5_lopban_1 X0 X1)) \wedge ((v3_rlvect_1 (k5_lopban_1 X0 X1)) \wedge ((v4_rlvect_1 \\ & (k5_lopban_1 X0 X1)) \wedge ((v5_rlvect_1 (k5_lopban_1 X0 X1)) \wedge ((v6_rlvect_1 \\ & (k5_lopban_1 X0 X1)) \wedge ((v7_rlvect_1 (k5_lopban_1 X0 X1)) \wedge ((v8_rlvect_1 \\ & (k5_lopban_1 X0 X1)) \wedge (l1_rlvect_1 (k5_lopban_1 X0 X1)))))))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v2_struct_0 X1) \wedge \\ & ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 \\ & X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge \\ & ((v8_rlvect_1 X1) \wedge ((v3_normsp_0 X1) \wedge ((v4_normsp_0 X1) \wedge ((v2_normsp_1 \\ & X1) \wedge (l1_normsp_1 X1)))))))))) \Rightarrow (m1_subset_1 (k4_rsspace4 \\ & X0 X1) (k1_zfmisc_1 (u1_struct_0 (k5_lopban_1 X0 X1)))) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v2_struct_0 X1) \wedge \\ & ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 \\ & X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge \\ & ((v8_rlvect_1 X1) \wedge ((v3_normsp_0 X1) \wedge ((v4_normsp_0 X1) \wedge ((v2_normsp_1 \\ & X1) \wedge (l1_normsp_1 X1)))))))))) \Rightarrow (m1_rlsub_1 (g1_rlvect_1 \\ & (k4_rsspace4 X0 X1) (k10_rsspace (k5_lopban_1 X0 X1) (k4_rsspace4 \\ & X0 X1)) (k8_rsspace (k5_lopban_1 X0 X1) (k4_rsspace4 X0 X1)) (k9_rsspace \\ & (k5_lopban_1 X0 X1) (k4_rsspace4 X0 X1)) (k5_lopban_1 X0 X1))) \end{aligned}$$