

t18_ring_1

(TMNjjVAvb4reYdqyjszokSyypsPKcmAgcYdt)

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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 $v5_group_1 : \iota \Rightarrow o$ be given. Let $v4_vectsp_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ 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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_ideal_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_ideal_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_ideal_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v2_ring_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_ring_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_struct_0 : \iota \Rightarrow o$ be given. Let $v1_vectsp_2 : \iota \Rightarrow o$ be given. Let $v1_ring_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v36_algstr_0 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_struct_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 \\
 & X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge \\
 & ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))) \Rightarrow \\
 & (\forall X1. ((\neg v1_xboole_0 X1) \wedge ((v1_ideal_1 X1 X0) \wedge ((v2_ideal_1 \\
 & X1 X0) \wedge ((v3_ideal_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\
 & X0))))))) \Rightarrow ((v1_ring_1 X1 X0) \Leftrightarrow (v1_vectsp_2 (k2_ring_1 X0 X1))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 \\
 & X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 X0) \wedge \\
 & ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))) \Rightarrow \\
 & (\forall X1. ((\neg v1_xboole_0 X1) \wedge ((v1_ideal_1 X1 X0) \wedge ((v2_ideal_1 \\
 & X1 X0) \wedge ((v3_ideal_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\
 & X0))))))) \Rightarrow ((v1_subset_1 X1 (u1_struct_0 X0)) \Leftrightarrow (\neg v6_struct_0 \\
 & (k2_ring_1 X0 X1))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge \\ & ((v3_group_1 X0) \wedge (v5_group_1 X0) \wedge (v4_vectsp_1 X0) \wedge (v5_vectsp_1 \\ & X0) \wedge (v2_rlvect_1 X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge \\ & (l6_algstr_0 X0)))))) \wedge ((\neg v1_xboole_0 X1) \wedge (v1_ideal_1 \\ & X1 X0) \wedge (v2_ideal_1 X1 X0) \wedge (v3_ideal_1 X1 X0) \wedge (m1_subset_1 X1 \\ & (k1_zfmisc_1 (u1_struct_0 X0)))))) \Rightarrow ((v36_algstr_0 (k2_ring_1 \\ & X0 X1)) \wedge (v5_group_1 (k2_ring_1 X0 X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge \\ & ((v3_group_1 X0) \wedge (v4_vectsp_1 X0) \wedge (v5_vectsp_1 X0) \wedge (v2_rlvect_1 \\ & X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))) \wedge \\ & ((\neg v1_xboole_0 X1) \wedge (v1_ideal_1 X1 X0) \wedge (v2_ideal_1 X1 X0) \wedge (\\ & (v3_ideal_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))))) \Rightarrow ((v13_algstr_0 (k2_ring_1 X0 X1)) \wedge (v36_algstr_0 \\ & (k2_ring_1 X0 X1)) \wedge (v3_group_1 (k2_ring_1 X0 X1)) \wedge (v4_vectsp_1 \\ & (k2_ring_1 X0 X1)) \wedge (v5_vectsp_1 (k2_ring_1 X0 X1)) \wedge (v2_rlvect_1 \\ & (k2_ring_1 X0 X1)) \wedge (v3_rlvect_1 (k2_ring_1 X0 X1)) \wedge (v4_rlvect_1 \\ & (k2_ring_1 X0 X1)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (v13_algstr_0 X0) \wedge \\ & ((v3_group_1 X0) \wedge (v4_vectsp_1 X0) \wedge (v5_vectsp_1 X0) \wedge (v2_rlvect_1 \\ & X0) \wedge (v3_rlvect_1 X0) \wedge (v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))) \wedge \\ & ((\neg v1_xboole_0 X1) \wedge (v1_ideal_1 X1 X0) \wedge (v2_ideal_1 X1 X0) \wedge (\\ & (v3_ideal_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0)))))) \Rightarrow ((\neg v2_struct_0 (k2_ring_1 X0 X1)) \wedge (v36_algstr_0 \\ & (k2_ring_1 X0 X1))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. (l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0. (l5_algstr_0 X0) \Rightarrow ((l4_algstr_0 X0) \wedge (l4_struct_0 X0)) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge \\ & ((v3_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge ((v2_rlvect_1 \\ & X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))))))) \wedge \\ & ((\neg v1_xboole_0 X1) \wedge ((v1_ideal_1 X1 X0) \wedge ((v2_ideal_1 X1 X0) \wedge (\\ & (v3_ideal_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 \\ & X0))))))) \Rightarrow ((v36_algstr_0 (k2_ring_1 X0 X1)) \wedge (l6_algstr_0 (\\ & k2_ring_1 X0 X1))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l4_algstr_0 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow (((v1_subset_1 \\ & X1 (u1_struct_0 X0)) \wedge (v1_ring_1 X1 X0)) \Rightarrow (v2_ring_1 X1 X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge (l4_algstr_0 X0)) \Rightarrow (\forall X1. \\ & (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((v2_ring_1 \\ & X1 X0) \Rightarrow ((v1_subset_1 X1 (u1_struct_0 X0)) \wedge (v1_ring_1 X1 X0)))) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_group_1 \\ & X0) \wedge ((v5_group_1 X0) \wedge ((v4_vectsp_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (\\ & (v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 \\ & X0)))))))))) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge ((v1_ideal_1 X1 \\ & X0) \wedge ((v2_ideal_1 X1 X0) \wedge ((v3_ideal_1 X1 X0) \wedge (m1_subset_1 X1 (\\ & k1_zfmisc_1 (u1_struct_0 X0))))))) \Rightarrow ((v2_ring_1 X1 X0) \Leftrightarrow ((\neg v2_struct_0 \\ & (k2_ring_1 X0 X1)) \wedge ((\neg v6_struct_0 (k2_ring_1 X0 X1)) \wedge ((v13_algstr_0 \\ & (k2_ring_1 X0 X1)) \wedge (v3_group_1 (k2_ring_1 X0 X1)) \wedge ((v5_group_1 \\ & (k2_ring_1 X0 X1)) \wedge ((v4_vectsp_1 (k2_ring_1 X0 X1)) \wedge ((v5_vectsp_1 \\ & (k2_ring_1 X0 X1)) \wedge ((v2_rlvect_1 (k2_ring_1 X0 X1)) \wedge ((v3_rlvect_1 \\ & (k2_ring_1 X0 X1)) \wedge ((v4_rlvect_1 (k2_ring_1 X0 X1)) \wedge ((v1_vectsp_2 \\ & (k2_ring_1 X0 X1)) \wedge (l6_algstr_0 (k2_ring_1 X0 X1)))))))))))))) \end{aligned}$$