

t16_hilbasis

(TMd4JV9aWvSp6VgLoyx1iAKsSXhtVyhvn3L)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v5_vectsp_1 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k14_polynom3 : \iota \Rightarrow \iota$ 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 $k5_numbers : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_normsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_algseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $k9_polynom3 : \iota \Rightarrow \iota$ 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 $l3_struct_0 : \iota \Rightarrow o$ be given. Let $v36_algstr_0 : \iota \Rightarrow o$ be given. Let $k1_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_normsp_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11_polynom3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_struct_0 : \iota \Rightarrow \iota$ be given. Let $k5_struct_0 : \iota \Rightarrow \iota$ be given. Let $k10_polynom3 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1_xboole_0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v5_vectsp_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))) \Rightarrow \\
& (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers (u1_struct_0 \\
& X0)) \wedge ((v1_algseq_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\
& k5_numbers (u1_struct_0 X0)))))) \Rightarrow (\forall X2.((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 k5_numbers (u1_struct_0 X0)) \wedge ((v1_algseq_1 \\
& X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (\\
& u1_struct_0 X0)))))) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
& (k14_polynom3 X0))) \Rightarrow (\forall X4.(m1_subset_1 X4 (u1_struct_0 \\
& (k14_polynom3 X0))) \Rightarrow (((X1 = X3) \wedge (X2 = X4)) \Rightarrow (k3_normsp_1 X0 X1 X2 = \\
& k5_algstr_0 (k14_polynom3 X0) X3 X4))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \Rightarrow ((v1_funct_1 (k9_polynom3 X0)) \wedge ((v1_funct_2 (k9_polynom3 X0) k5_numbers (u1_struct_0 X0)) \wedge (v1_algseq_1 (k9_polynom3 X0) X0))) \tag{4}$$

Assume the following.

$$\forall X0.(l6_algstr_0 X0) \Rightarrow ((l2_algstr_0 X0) \wedge (l5_algstr_0 X0)) \tag{5}$$

Assume the following.

$$\forall X0.(l5_algstr_0 X0) \Rightarrow ((l4_algstr_0 X0) \wedge (l4_struct_0 X0)) \tag{6}$$

Assume the following.

$$\forall X0.(l4_struct_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l3_struct_0 X0)) \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \Rightarrow ((v1_funct_1 (k9_polynom3 X0)) \wedge ((v1_funct_2 (k9_polynom3 X0) k5_numbers (\\
& u1_struct_0 X0)) \wedge (m1_subset_1 (k9_polynom3 X0) (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0))))))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v5_vectsp_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))) \Rightarrow \\
& ((\neg v2_struct_0 (k14_polynom3 X0)) \wedge ((v36_algstr_0 (k14_polynom3 \\
& X0)) \wedge (l6_algstr_0 (k14_polynom3 X0))))
\end{aligned} \tag{9}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v5_vectsp_1 \\
& X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge (l6_algstr_0 X0)))))) \Rightarrow \\
& (\forall X1.((\neg v2_struct_0 X1) \wedge ((v36_algstr_0 X1) \wedge (l6_algstr_0 \\
& X1)))) \Rightarrow ((X1 = k14_polynom3 X0) \Leftrightarrow ((\forall X2.(X2 \in u1_struct_0 X1) \Leftrightarrow \\
& ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers (u1_struct_0 X0)) \wedge \\
& ((v1_algseq_1 X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& k5_numbers (u1_struct_0 X0)))))))))) \wedge ((\forall X2.(m1_subset_1 \\
& X2 (u1_struct_0 X1)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 \\
& X1)) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge ((v1_funct_2 X4 k5_numbers \\
& (u1_struct_0 X0)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\
& k5_numbers (u1_struct_0 X0)))))) \Rightarrow (\forall X5.((v1_funct_1 X5) \wedge \\
& ((v1_funct_2 X5 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 X5 \\
& (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow \\
& (((X2 = X4) \wedge (X3 = X5)) \Rightarrow (k1_algstr_0 X1 X2 X3 = k2_normsp_1 X0 X4 X5)))))) \wedge \\
& ((\forall X2.(m1_subset_1 X2 (u1_struct_0 X1)) \Rightarrow (\forall X3.(\\
& m1_subset_1 X3 (u1_struct_0 X1)) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge \\
& ((v1_funct_2 X4 k5_numbers (u1_struct_0 X0)) \wedge (m1_subset_1 X4 \\
& (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 X0)))))) \Rightarrow \\
& (\forall X5.((v1_funct_1 X5) \wedge ((v1_funct_2 X5 k5_numbers (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\
& X0)))))) \Rightarrow (((X2 = X4) \wedge (X3 = X5)) \Rightarrow (k6_algstr_0 X1 X2 X3 = k11_polynom3 \\
& X0 X4 X5)))))) \wedge ((k4_struct_0 X1 = k9_polynom3 X0) \wedge (k5_struct_0 \\
& X1 = k10_polynom3 X0))))))
\end{aligned} \tag{10}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2_struct_0 X0) \wedge ((v13_algstr_0 X0) \wedge ((v3_rlvect_1 \\
& X0) \wedge ((v4_rlvect_1 X0) \wedge ((v5_vectsp_1 X0) \wedge (l6_algstr_0 X0)))))) \Rightarrow \\
& (\forall X1.(m1_subset_1 X1 (u1_struct_0 (k14_polynom3 X0))) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 (u1_struct_0 (k14_polynom3 X0))) \Rightarrow \\
& (\forall X3.((v1_funct_1 X3) \wedge ((v1_funct_2 X3 k5_numbers (u1_struct_0 \\
& X0)) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers (u1_struct_0 \\
& X0)))))) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge ((v1_funct_2 X4 k5_numbers \\
& (u1_struct_0 X0)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\
& k5_numbers (u1_struct_0 X0)))))) \Rightarrow (((X1 = X3) \wedge (X2 = X4)) \Rightarrow (k5_algstr_0 \\
& (k14_polynom3 X0) X1 X2 = k3_normsp_1 X0 X3 X4))))))
\end{aligned}$$